

**BUREAU OF THE AMERICAN REPUBLICS,**

WASHINGTON, U. S. A.

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- I. COSTA RICA AT THE WORLD'S FAIR.
- II. RAILWAYS OF SOUTH AMERICA.
- III. MINING EXPOSITION IN CHILE.
- IV. CURRENCY CHANGES IN CHILE.
- V. IRON ORE AND MANGANESE IN CUBA.
- VI. COMMERCIAL AND INDUSTRIAL INFORMATION.

BUREAU OF THE AMERICAN REPUBLICS,  
NO. 2 LAFAYETTE SQUARE, WASHINGTON, D. C., U. S. A.

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*Director.*—CLINTON FURBISH.

*Secretary.*—FREDERIC EMORY.

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## CONTENTS.

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	PAGE.
I. Costa Rica at the World's Fair.....	9
II. Railways of South America.....	29
III. Mining Exposition in Chile.....	49
IV. Currency Changes in Chile.....	54
V. Iron Ore and Manganese in Cuba.....	55
VI. Commercial and Industrial Information—	
Argentine Republic.....	56
Bolivia.....	58
British Honduras.....	59
Chile.....	59
Mexico.....	61
Miscellaneous.....	64
ILLUSTRATIONS—	
Costa Rica Building, World's Fair.....	10
Interior of Costa Rica Building, looking north.....	12
Interior of Costa Rica Building, looking south.....	14
Costa Rica Section in Anthropological Building.....	18

## PUBLICATIONS OF THE BUREAU.

Four monthly bulletins, in addition to the current issue, have been published by the Bureau of the American Republics, viz., "Coffee in America," October, 1893; "Coal and Petroleum in Colombia," etc., November, 1893, "Minerals and Resources of Northeastern Nicaragua," etc., December, 1893, and "Finances of Chile," etc., January, 1894.

Of the publications of the Bureau, the following will be furnished to applicants at the prices named in the list. All orders for these publications must be addressed to "The Public Printer, Washington, D. C.," and must be accompanied with the money for same. No money will be received by the Bureau or its officers:

### PRICE LIST.

	Cents.
3. Patent and Trade-mark Laws of America.....	5
4. Money, Weights and Measures of the American Republics.....	5
6. Foreign Commerce of the American Republics .....	20
8. Import Duties of Brazil.....	10
10. Import Duties of Cuba and Puerto Rico .....	15
11. Import Duties of Costa Rica .....	10
13. Commercial Directory of Brazil .....	5
14. Commercial Directory of Venezuela.....	5
15. Commercial Directory of Colombia .....	5
16. Commercial Directory of Peru .....	5
17. Commercial Directory of Chile .....	5
18. Commercial Directory of Mexico.....	15
19. Commercial Directory of Bolivia, Ecuador, Paraguay and Uruguay.....	5
20. Import Duties of Nicaragua .....	10
21. Import Duties of Mexico (revised) .....	15
22. Import Duties of Bolivia .....	20
23. Import Duties of Salvador.....	5
24. Import Duties of Honduras.....	10
25. Import Duties of Ecuador.....	5
26. Commercial Directory of the Argentine Republic .....	5
27. Import Duties of Colombia.....	5
28. Commercial Directory of Central America .....	10
29. Commercial Directory of Haiti and Santo Domingo.....	5
30. First Annual Report of the Bureau, 1891 .....	10

	Cents.
32. Handbook of Guatemala.....	35
33. Handbook of Colombia.....	30
34. Handbook of Venezuela.....	35
36. Import Duties of Venezuela.....	5
38. Commercial Directory of Cuba and Puerto Rico.....	10
39. Commercial Directory of European Colonies.....	10
42. Newspaper Directory of Latin America.....	5
43. Import Duties of Guatemala.....	25
44. Import Duties of the United States.....	5
45. Import Duties of Peru.....	25
46. Import Duties of Chile.....	25
47. Import Duties of Uruguay.....	25
48. Import Duties of the Argentine Republic.....	25
49. Import Duties of Haiti.....	10
50. Handbook of the American Republics, No. 3.....	50
51. Handbook of Nicaragua.....	50
53. Immigration and Land Laws of Latin America.....	40
55. Handbook of Bolivia.....	40
61. Handbook of Uruguay.....	50
62. Handbook of Haiti.....	50
63. How the Markets of Latin America may be Reached.....	40

## PUBLICATIONS NOT NUMBERED.

Commercial Directory of Latin America.....	40
Second Annual Report of the Bureau, 1892.....	5
Third Annual Report of the Bureau, 1893.....	5
Manual de las Republicas Americanas, 1892.....	50

## UNITED STATES CONSULATES.

Frequent application is made to the Bureau for the addresses of United States consuls in the South and Central American Republics. Those desiring to correspond with any consul can do so by addressing "The United States Consulate" at the point named. Letters thus addressed will be delivered to the proper person. It must be understood, however, that it is not the duty of consuls to devote their time to private business; that all such letters may properly be treated as personal, and that any labor involved may be subject to charge therefor.

The following is a list of United States Consulates in the different Republics:

### ARGENTINE REPUBLIC—

Buenos Aires,  
Cordoba,  
Rosario.

### BOLIVIA—

La Paz.

### BRAZIL—

Bahia,  
Para,  
Pernambuco,  
Rio Grande do Sul,  
Rio de Janeiro,  
Santos.

### CHILE—

Antofagasta,  
Arica,  
Coquimbo,  
Iquique,  
Talcahuano,  
Valparaiso.

### COLOMBIA—

Barranquilla,  
Bogota,  
Cartagena,  
Colon (Aspinwall),  
Medellin,  
Panama.

### COSTA RICA—

San José.

### DOMINICAN REPUBLIC—

Puerto Plata,  
Samana,  
Santo Domingo.

### ECUADOR—

Guayaquil.

### GUATEMALA—

Gautemala.

## HAITI—

Cape Haitien,  
Port-au-Prince.

## HONDURAS—

Ruatan,  
Tegucigalpa.

## MEXICO—

Acapulco,  
Chihuahua,  
Durango,  
Ensenada,  
Guaymas,  
La Paz,  
Matamoras,  
Mazatlan,  
Merida,  
Mexico,  
Nogales,  
Nuevo Laredo,  
Paso del Norte,  
Piedras Negras,  
Saltillo,  
Tampico,  
Tuxpan,  
Vera Cruz.

## NICARAGUA—

Managua,  
San Juan del Norte.

## PARAGUAY—

Asuncion.

## PERU—

Callao.

## SALVADOR—

San Salvador.

## URUGUAY—

Colonia,  
Montevideo,  
Paysandu.

## VENEZUELA—

La Guayra,  
Maracaibo,  
Puerto Cabello.

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## I.

# COSTA RICA AT THE WORLD'S FAIR.

COSTA RICA AT THE WORLD'S COLUMBIAN EXPOSITION,  
CHICAGO, 1893. BY JOAQUÍN BERNARDO CALVO,  
COSTA RICAN COMMISSIONER.

As appears from the official publications, the government of Costa Rica, as soon as the invitation to participate in the World's Columbian Exposition reached its hands, decided to give it the most careful attention, and issued orders for the gathering of choice samples of all natural, agricultural and industrial products of that rich country to be exhibited in the great contest of the civilized world. There were two reasons that principally influenced the Costa Rican government in making that decision: First, its desire to bind more intimately the existing intercourse of friendship and commerce with the United States of America; and, secondly, the consideration that, as the great city of Chicago, situated in the center of this great country, is the emporium of trade, and the unrivalled railroad center of the world, it offered all kinds of facilities to that object, and was consequently a sure guarantee of success to the Exposition.

In order to carry the said decision to success, the Executive recommended the project to the National Congress, and that body appropriated, to meet the expenses of the Costa Rica exhibit, the sum of \$150,000, which, proportionately to the number of inhabitants of the Republic, is larger than the amount granted for the purpose by any other nation.

As soon as the appropriation was made, Señor Don José Joaquín Rodríguez, the president of the Republic, ordered an office to be opened, wherein all the products and objects to be exhibited in Chi-

cago should be collected; and there, under the active and wise direction of Don Joaquín Lizano, and Don José Vargas, M., who succeeded each other as head of the Department of Promotion of Public Welfare, and the active co-operation of Don José Lino Matarrita, of Nicoya, Don Trinidad Vargas, of Golfo Dulce, and Don Teodoro Koshney, of San Carlos, the collecting of the exhibit was started. According to the catalogue, the most valuable exhibit of products was due to the efforts of the latter gentleman.

At the same time that this work was being carried on with an amount of interest never before shown in the country on similar occasions, the government sent instructions to Don Joaquín Bernardo Calvo, chargé d'affaires of Costa Rica, at Washington, for the selection of a site and the construction of a building as well as for the acquisition of all the fixtures required. He was also authorized to take all necessary steps with the officers of the Exposition for the success of the undertaking.

It was unfortunate that, during the course of these preparations, the danger of an invasion of cholera overshadowed the country and interrupted for awhile their progress. It was feared also that the Chicago Exposition itself could not be carried out on account of the quarantine, and because some cases of cholera had appeared in the city of New York.

Costa Rica was then obliged to close her ports, and to abandon for the moment, almost completely, all projects referring to the Exposition. To this calamity, another of serious consequences, namely, the fall in the value of silver and the consequent rise of the rates of foreign exchange, befell the country.

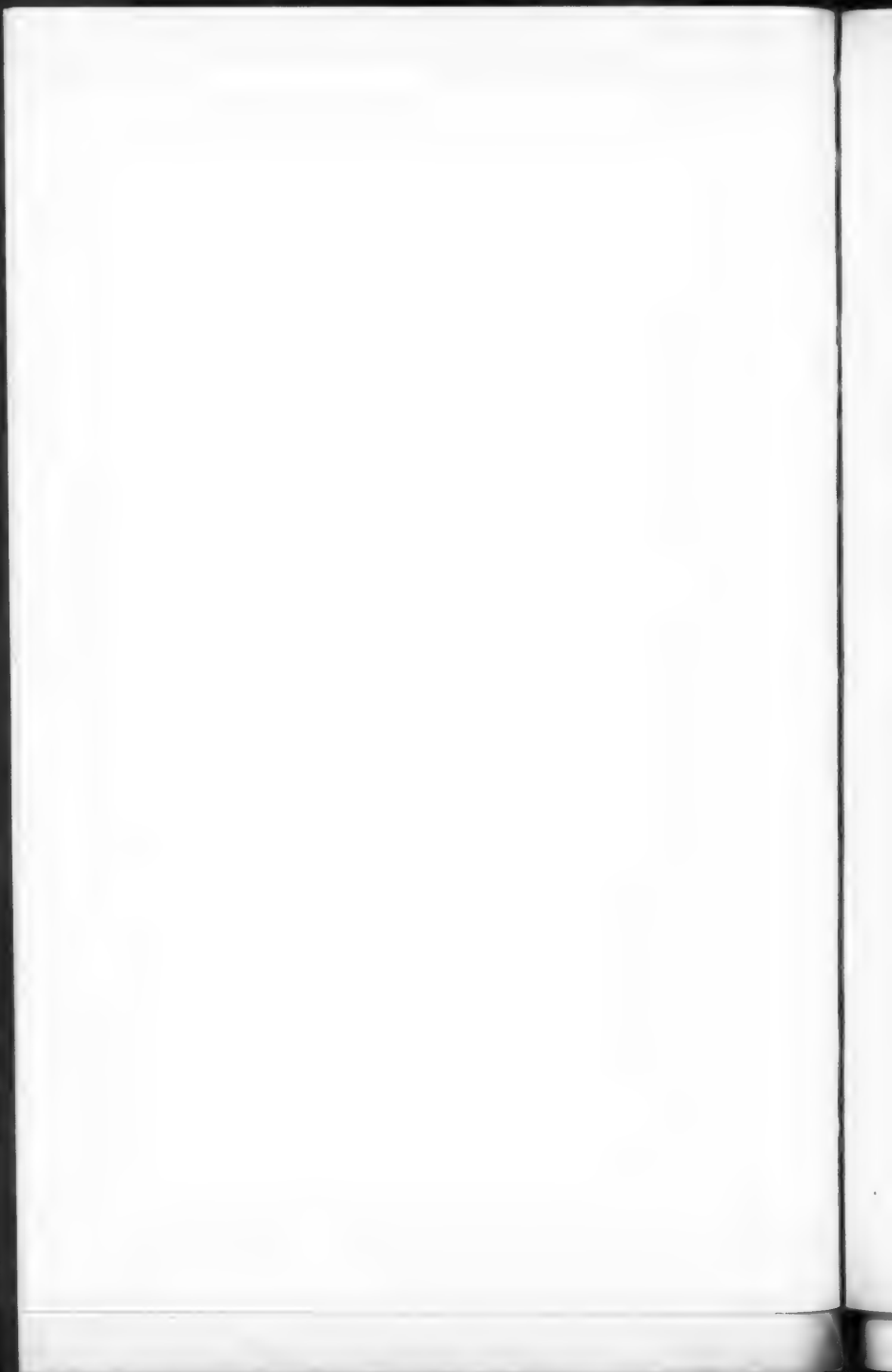
These great obstacles were not sufficient, however, to effect a radical change in the decision already made on the subject, and as soon as the fear of the cholera was over, the government resolved to follow the former plan, and ordered at once the continuation of the preparations. But the time then was rather limited, and it is therefore to be regretted that none of the collections of the products could be exhibited complete.

#### THE COSTA RICA PAVILION.

For the reasons stated above, it was considered necessary to set aside the plans for the pavilion, as they had been drawn in Costa

THE COSTA RICA BUILDING, LOOKING WEST.





Rica and approved, and others, more economical, drawn by Architect James G. Hill, of Washington, D. C., following the indications of the engineer, Don Nicolás Chavarría, M., director of public works of Costa Rica, were adopted in their place.

The contract for the construction was entered into between the chargé d' affaires, Mr. Calvo, and Messrs. Cass, Chapman & Co., of Chicago; but these gentlemen, on account of the pressure of time, were unable to finish their work before the 1st of May, the day on which the Exposition was inaugurated,

The Costa Rican building was situated at the east end of the North pond, facing west, and the location was one of the best within the grounds. Across the North pond, which offered a most beautiful perspective, and within a distance to be fully appreciated, were the Illinois, Washington, Indiana, Ohio and Wisconsin buildings. To the right, were the galleries of Fine Arts, and on the left, the buildings of Guatemala and Brazil, while as a background, and not far distant, Lake Michigan murmured its praises to the efforts of mortal man.

The building was Doric in style; 103 feet long by 60 feet wide, two stories and clerestory, making the full height 50 feet. On each side, there was a Doric portico 22 feet wide, supported by four large pilasters. On the west front, a spacious platform, with a handsome balustrade, adorned with beautiful stone urns brought from Costa Rica, led up to the main floor; and opposite this front entrance, broad double stairways led to the second, or gallery floor, supported by eighteen columns rising to the full height of the clerestory.

The cornices, frieze molding, caps and bases, window casements, etc., were made of iron. The main walls were cemented, and all was painted in soft colors. The inside walls were plastered, and the walls and timber work were frescoed in a modest and becoming manner.

The building was lighted by twenty large double casement windows in the first story, and ten large skylights in the roof of the clerestory, while on all sides of the latter, the windows were pivoted so that, when opened, they could afford perfect ventilation. Ample toilet rooms were provided on each floor. Over each main entrance to the building the national coat-of-arms of the Central American

INTERIOR OF THE COSTA RICA MUSEUM, LOOKING NORTH.



Republic in bold relief was placed and constituted a striking addition to the decorative part of the work. The building cost \$20,000.\*

#### THE COSTA RICAN COMMISSION.

When the products to be exhibited were ready, and all the necessary preparations in Chicago had been completed, the Government issued the following decree:†

No. 112. |

SAN JOSÉ, March 29, 1893.

The President of the Republic has resolved to organize the Commission that is to represent Costa Rica in the approaching International Exposition of Chicago in the following form:

President, Señor Don Manuel M. Peralta, E. E. and M. P., from Costa Rica at Washington.

Secretary, Señor Don Joaquín Bernardo Calvo, Chargé d'Affaires of Costa Rica at Washington.

Vice-President and Commissioner-General for Agriculture and Industry, Señor Don David J. Guzmán.

Vice-Secretary and Commissioner for Archæology, Señor Don Anastasio Alfaro.

Signed by the President.

(Countersigned)

VARGAS, M.

The Commission did not meet in Chicago until about the middle of May, and during that period, Messrs. Calvo and Alfaro were in charge of the work; co-operating with them, was Dr. Francisco J. Rucavado, who afterward was also appointed commissioner.

#### INSTALLATION.

As to the interior of the pavilion, the plan generally adopted in the arrangement of museums was followed: A large hall surrounded by a gallery accessible by two staircases, placed one on each side of the eastern entrance of the pavilion, as has been said; hand some glass cases, containing natural and agricultural products, arranged in classified groups beneath the gallery on the main floor, in the center of which rose a high graceful pyramid, formed of minerals, having two others, composed of specimens of wood, placed on its sides.

\* The foregoing description of the building appeared in the General Catalogue of the World's Columbian Exposition.

† La Gaceta, Diario Oficial, No. 74, March 30, 1893.

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Each one of the corners of this floor was occupied by glass cases containing samples of beautiful silk fabrics in the favorite colors of the people of Costa Rica, in the shape of scarfs, mantillas and wraps, all of which gave due credit to the industry of the country on account of their fine workmanship.

A precious collection of gold and silver jewels, and of gold and tortoise shell combined, very carefully worked throughout, alongside of a complete collection of the national coins, and two of foreign coins, a complete collection of bank notes, and of the national postage stamps, presented one of the attractions of the exhibition.

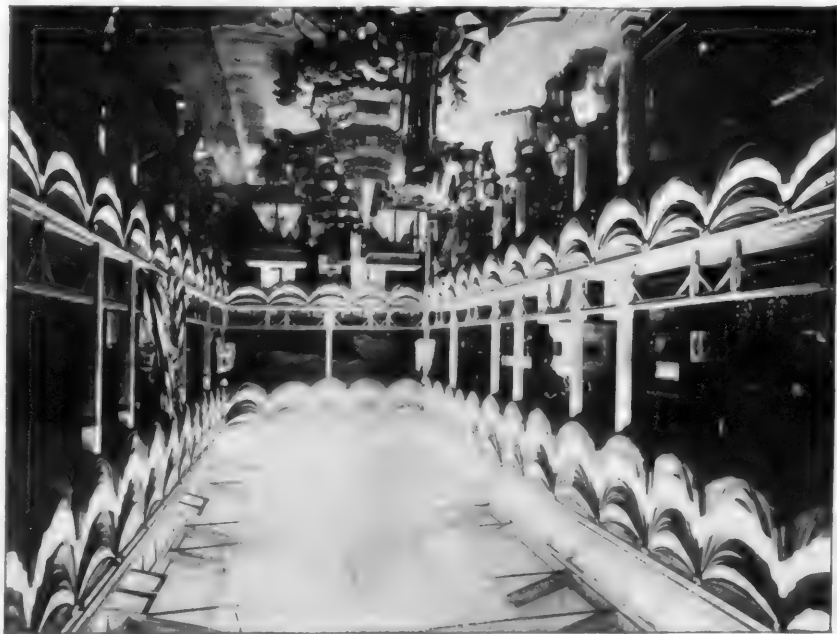
Fishing utensils and implements used in the country were exhibited, and a collection of fish, preserved in alcohol, showed the varieties of this product, both in salt and fresh waters.

At the northern extremity of the same floor, the aromatic and delicious Costa Rican coffee was served. The space inside not being large enough to accommodate the always increasing number of persons drawn by the celebrity of this peerless product of Costa Rica, an addition was made to it on the outside of the building with a capacious awning covering.

At the southern extremity of the gallery, there was a drawing-room, decorated with elegant curtains. Here we saw the portraits of the President of the Republic, Señor Rodríguez; of the four Secretaries of the Executive, and a handsome view of the city of San José, the capital of Costa Rica.

At the other extremity, there was a panoramic view of the steep heights of the volcano of Irazu, the only place in the world from which the Atlantic and the Pacific Oceans can be seen simultaneously. On the principal sides of the gallery, and in glass cases arranged as those on the first floor, the magnificent school exhibits of which Costa Rica can be proud, were placed; sundry articles made by women—among these two needle-embroidered pictures on silk; pita hats (generally known as Panama hats), and different kinds of implements, such as brushes, harnesses, saddles and other like articles, as likewise sundry articles of wrought and cast iron, etc., and an extensive collection of photographic views of interesting places, buildings, coffee patios, machinery, railways, roads, villages and types of the natives, etc. At one side of the hall, were a considerable number of literary works, written by Costa Rican authors; maps, drawings,

INTERIOR OF THE COSTA RICA BUILDING, LOOKING SOUTH.



reports, and other official publications, which give honor to their country. In this section of the exhibition, special mention is due to the National Museum of Costa Rica, for the very rich and extensive collection of stuffed animals, the ornithological part being very remarkable and attractive.

Coffee plants, palm trees and Costa Rica orchids and flowers were blended together with the national colors, forming the decoration and ornamentation of the large hall. If the appearance of the unpretentious but elegant building of Costa Rica caused a very pleasing impression when seen from the outside, the view of the interior produced a real surprise on account of the magnificent *tout ensemble* it presented to the spectator.

#### LIST OF THE EXHIBITS.

The exhibit of Costa Rica was characteristically a display of the products of the land. Classified according to the regulations issued by the Chicago Exposition, it was comprised in the following groups:

##### DEPARTMENT A.—AGRICULTURE.

GROUP NO. 1.—Wheat of various kinds, Indian corn of all varieties, barley, rice, wheat flour, yucca flour, corn meal, bran.

GROUP NO. 2.—Biscuits and crackers, vermicelli and macaroni.

GROUP NO. 3.—Cane sugar, native honey of five varieties, exotic honey, confectionery.

GROUP NO. 4.—Potatoes, sweet potatoes, yams, radishes, turnips, beets, onions, peanuts, roots for starch.

GROUP NO. 5.—Beans of twenty-three different kinds.

GROUP NO. 6.—Prepared cocoanut.

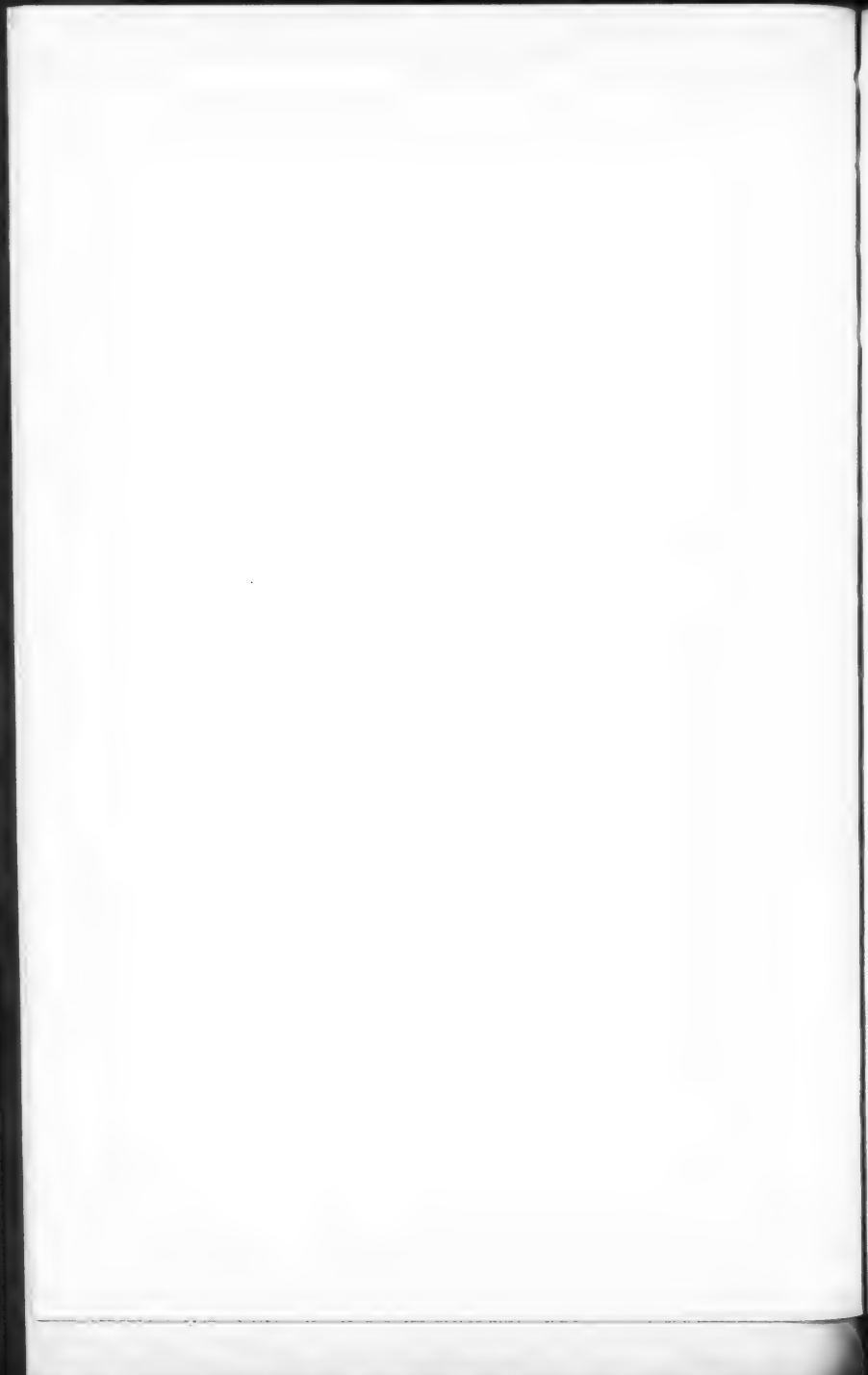
GROUP NO. 7.—Cheese (never came).

GROUP NO. 8.—Coffee of various kinds and in its different grades of preparation, Liberia coffee, cacao, chocolate, pepper, cloves, anise and other spices, tobacco in the leaf.

GROUP NO. 9.—Cotton, ochreous color cotton, nineteen varieties of vegetable fibers, native silkworms, horse hair as a harness material.

GROUP NO. 10.—Twenty-two different kinds of mineral waters, ten different kinds of thermal waters.

GROUP NO. 11.—Wines, rums, cognac and other spirits; cordials and liquors, bitters, vinegar, chicha.



GROUP No. 12.—Beers, ales, porter, stout.

GROUP No. 13.—Photographs of fences, farm buildings, farm-houses, patios for drying coffee.

GROUP No. 15.—Statistics of coffee farms.

GROUP No. 16.—Coffee machinery. (See Group No. 79.)

GROUP No. 17.—A large collection of hides and skins of eighty-two species of wild animals, tortoise shells of various kinds, fossil tusks and molars of mastodons.

GROUP No. 18.—Animal oils of eleven kinds, whale oil, fish oil, lizard oil, tortoise oil, etc., vegetable oils of seven kinds, linseed oil, fig oil, palm oil, etc.; soap of various classes; stearine candles, two kinds.

#### FORESTRY—FOREST PRODUCTS.

GROUP No. 19.—A collection of 463 samples of different kinds of wood and timber used in construction and manufactures; ornamental and fancy woods, mahogany, cedar, etc.

Twenty-nine classes of dyeing, tanning and coloring plants.

Barks of various kinds; vegetable substances used for bedding and upholstering.

Gums and resins of fifty different classes, vegetable wax, India rubber, copal, turpentine, balsam of Peru, etc.; seeds and fruits for ornamental purposes, vegetable ivory, cocoanut shells, ornamental gourds, medicinal roots, sarsaparilla, herbs, barks, mosses, berries.

Baskets made of fibers.

#### DEPARTMENT B.—VITICULTURE.

GROUP No. 20.—Maranon wine, Coyol wine, brandy, cordials, rum and cognac.

#### POMOLOGY.

GROUP No. 21.—Peaches, quinces, apricots, oranges, lemons, citrons, limes, pomegranates, bananas, pineapples, guavas, mangoes, papaws, tamarinds, figs, sapotillos, anonas, marmee, etc., by imitations made in wax. Almonds, cocoanuts. Vinegar made from bananas.

#### FLORICULTURE.

GROUP No. 22.—Seventy species of orchids, palms, ferns: herbarium of sixty-two classified species.

## CULINARY VEGETABLES.

GROUP No. 23—Thirty-seven species of beans, vetches, lentils, peas, peppers, tomatoes, cucumbers, squashes, melons, eggplant, etc.; beets, turnips, potatoes, sweet potatoes, cassave, yucca.

## ARBORICULTURE.

GROUP No. 25—A collection of ninety ornamental trees and shrubs.

## DEPARTMENT C.—ANIMALS.

GROUP No. 32—Collection of 692 stuffed birds of Costa Rica.

GROUP No. 35—Collection of 789 insects.

GROUP No. 36—Collection of stuffed animals native to Costa Rica.

## DEPARTMENT D.—FISH AND FISHERIES.

GROUP No. 37—Collection of sponges and corals, conches and shells. Specimens of marine and fresh-water fish.

GROUP No. 38—Fishing gear, fishhooks, nets and seines, harpoons, gaffs, etc.

GROUP No. 40.—Fish oil of various kinds, polished shells.

## DEPARTMENT E.—MINES AND MINING.

GROUP No. 42.—Collection of seventy-four minerals, gold and silver bearing ores, gold, silver, iron, copper and lead ores; silver, iron and copper bearing ores; serpentine; iron and lead ores; mercury; lead and zinc ores, meteoric iron.

GROUP No. 43.—Lignite, tuba, etc.

GROUP No. 44.—Alabaster and marble; marble, black and white; granite and other stones; petrified wood.

GROUP No. 46.—Basanite, obsidian, clay, etc., yellow marl; labradorite, feldspar, etc.

GROUP No. 47.—Limestone, lime, carbonate of lime, carbonate of lime crystallized; gypsum.

GROUP No. 48.—Salt, sulphate, etc., sulphate of lime, marl, gypsum, etc., sulphur and pyrites, chalk, fossil shells.

GROUP No. 67.—Maps of the mines of Monte del Aguacate; plans of the mines of Monte del Aguacate.

## DEPARTMENT F.—MACHINERY, ETC.

GROUP NO. 75.—Portraits and lithographic groups, maps, charts, etc.; collection of diplomas, etc.; specimens of printing.

GROUP NO. 79.—A machine for preparing coffee. (See group No. 16.)

## DEPARTMENT G.—TRANSPORTATION.

GROUP NO. 83.—Harness, robes and accessories of the stable, whips, etc.; bridle reins and bits, spurs, saddles, saddlebags, trappings and accoutrements of horses.

GROUP NO. 85.—Ropes, cordage.

## DEPARTMENT H.—MANUFACTURES.

GROUP NO. 87.—A collection of drugs and other preparations.

GROUP NO. 89.—Specimens of binding, bookbinding; penholders, paper cutters made of tortoise shell and gold.

GROUP NO. 91.—Shell work, polished shells; mosaics made of shells.

GROUP NO. 92.—A collection of twelve stone urns.

GROUP NO. 96.—Specimens of wood, carved; collection of utensils made of wood, carved; silver and wood shovel used in the inauguration of the Costa Rica Railway to the Atlantic.

GROUP NO. 98.—Jewelry, rings, bracelets, necklaces, charms, medallions, gold covered and gilt jewelry, napkin rings, nail cleaners, combs, paper knives.

GROUP NO. 100.—Silk shawls, scarfs, wraps.

GROUP NO. 101.—Mats and cigar cases made of rushes, Panamá hats.

GROUP NO. 104.—Cloaks, mantillas, ladies' and children's costumes, boots and shoes. (The latter never came.)

GROUP NO. 105.—Collection of furs and skins, some of them tanned.

GROUP NO. 106.—Embroidered portraits, embroidered handkerchiefs, napkins, etc. Various samples of needlework; artificial flowers, trimmings of various classes.

GROUP NO. 107.—Combs, brushes, etc.

GROUP NO. 108.—Cigar cases, canes of ornamental woods.

GROUP NO. 110.—Vases, boxes, chessmen, fancy articles made of aromatic and ornamental wood, billiard balls and cues.

THE COSTA RICA SECTION AT THE ANTHROPOLOGICAL BUILDING, LOOKING NORTH.





GROUP NO. 111.—Tanned leathers. (Never came.)

GROUP NO. 118.—Wrought iron, artistic forgings.

#### DEPARTMENT L.—LIBERAL ARTS.

GROUP NO. 149.—General and complete school exhibition, handwriting, drawing, etc., needlework, embroidery, etc. Collection of text-books used in primary and higher schools, plans and photographs of school buildings, annals, reports, statistics, etc.

GROUP NO. 150. Very extensive collection of national publications, natural sciences, literature, history, geography, statistics, magazines and newspapers; bindings, specimens of typography, illustrated papers, schoolbooks, government and other official publications, maps, etc.

GROUP NO. 151 —Very extensive collection of photographs.

GROUP NO. 152.—Hydrographic survey of the Gulf of Nicoya and the harbor of Culebra; plan of the city of San José; plans of buildings.

GROUP NO. 153.—Reports of foreign relations; collections of postage stamps; civil and penal law of Costa Rica.

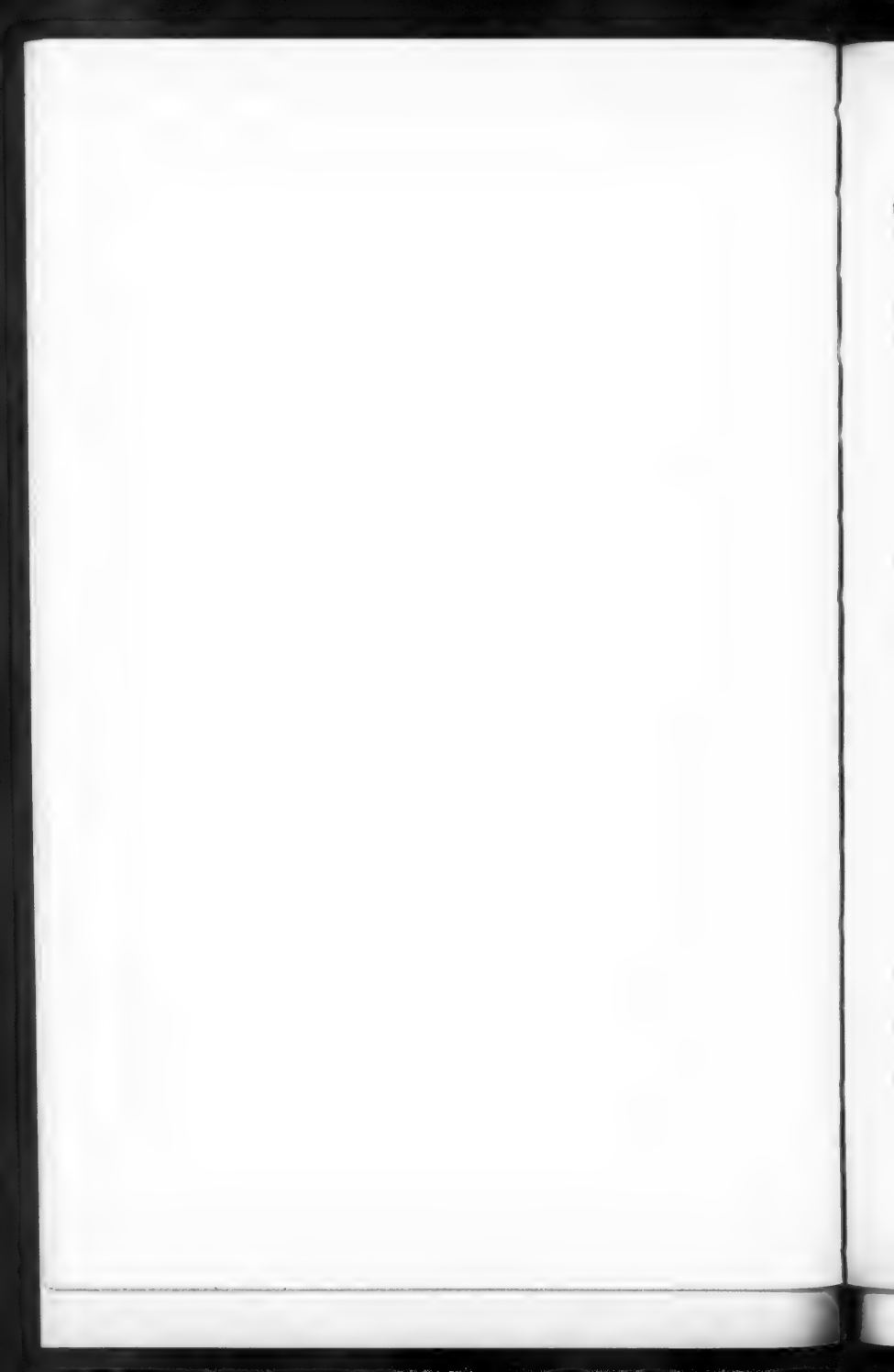
GROUP NO. 154.—Statistics of trade and commerce; government exhibit of coins, bank notes, moneys, postage stamps, etc.

GROUP NO. 158.—Musical compositions, national airs, etc. (never came), guitars and bandores made of fine woods.

#### DEPARTMENT OF ETHNOLOGY.

The archæological exhibit displayed by Costa Rica in a space of one thousand feet square in the Anthropological building was of high merit, scientifically, and of great actual value. It was noticeable at a glance that the three thousand exhibits composing it were all originals, not a single reproduction being found among them.

Apart from the merits of their antiquity, an antiquity originating from dates anterior to the discovery of America, it may be said that the Costa Rican archæology is the link connecting the ancient specimens found in the other states of Central America and the discoveries made in South America. In this respect, the Costa Rican archæology presents well-defined traces of two distinct civilizations, one descending from the north by the Pacific coast, and the other emigrating in an entirely opposite direction, from south to north, following the



temperate plains on the Atlantic side. The first is typified by the ancient people called Chorotega, and the latter by the Guetares.

With very rare exceptions, a continuous series of antiquities can be established along the Pacific, from the southern part of Costa Rica up to the northeastern portion of Nicaragua, Nicoya being here one of the principal centers of the Chorotegan civilization.

On the western side of the country, from Chiriquí up to the River of San Juan de Nicaragua, a similar distribution is noticeable, the only difference being that there the civilization of the Guetares seems to have spread out toward the interior of the country, following always the valleys alongside of the Reventazon River, up to the central plateau, where it comes in contact with the Chorotegas, near the Herradura volcano on the Pacific coast.

This is what these 3,000 archaeological specimens exhibited by Costa Rica showed, according to Señor Alfaro, Commissioner of Archaeology. All and each one of them are perfectly well identified, as absolutely all have been excavated from ancient tombs in certain localities, a work in which many private individuals at first, and lately the National Museum, and even the government directly, have spent thousands and thousands of dollars.

The typical tombs wherein these specimens of antiquity were found, are brought to light by large oil paintings, reproductions of the original photographs taken at the time the excavations were made in several Indian burial grounds.

There was, among other paintings decorating this section, one of great historical value, representing the villa of the Cacique of Suerre in 1544, executed from the drawings of Jerome Benzoni, an Italian soldier, who, in the same year, followed Diego Gutierrez, in the expedition he undertook to conquer and pacify the Indians.

In the decoration of this Costa Rican section, one of the most important of the Anthropological Building, a refined taste was noticeable throughout, combined with careful order. Everything presented the seal of its indigenous antiquity. The doors, the frames of the pictures, and even the folders of the Columbian maps, show the handicraft of the old American Indian, all forming an indigenous architecture, extremely interesting and instructive.

Coming now into the details of the component parts of this magnificent archaeological exhibition, it may be considered as divided

into three large groups. The first is that of idols and gold jewels, 150 in number, among which there are many that show a stage of great improvement in the goldsmith's art, such, for instance, as the hammered patens, many of which are composed of three superimposed sheets, so made, undoubtedly, as to give them greater solidity. Other figures present samples of perfect smelting work, such as the devilkins and the small bells. Vestiges of the mold and traces of the hammer can be noticed. There are also many pieces of copper, and in these, the outside gilding is one of the curious problems that archæology has been as yet unable to solve.

The second group is composed of objects of volcanic stones or rocks, among which there are some table-like, in the shape of perforated fruit dishes, representing the work of many months, and perhaps of whole years. Besides these exhibits and *metates*, the grinding-stone for corn, there are knives and maces of porphyry, of practical use to the aborigines; human and animal figures, some above the natural size, sculptured, if this term can be used, by the Indians, all forming an integral part of the exhibition. The ornaments of jade, a green stone highly appreciated among the natives of America as well as among Eastern Asiatics, and the origin of which, during many years, has been attributed to the latter, are also worthy of special notice.

The third and most numerous group is composed of earthenware utensils, presenting an immense variety as to their forms and sizes, some of such remarkable artistic taste as to have deserved the praises of the historians and chroniclers of the period of the Conquest. Among others, the eminent historian Oviedo, referring to the Indians inhabiting the islands of the Gulf of Nicoya, wrote as follows:

In the island of Chira, plates and dishes, and also jugs, jars and other kinds of vessels are manufactured; all are very elaborate, and as fine as the best black velvet, and as sparkling as a very well-polished jet. And I brought along with me some pieces of said crockery to this city of Santo Domingo, of the Hispaniola Island, which, so far as their beauty is concerned, might be presented to a prince. And of the size and shape that the Indians are ordered to make them, so they do make them.

As to its pecuniary value, the archæological exhibition of Costa Rica has been appraised at \$50,000. But these precious relics of the primitive inhabitants of the country would never be sold for any

amount of money, as they constitute a treasure, highly valuable, each object representing, as it does, a part of the unwritten history of important races that are no more.

The collections, arranged by the same commissioner of archæology, Señor Don Anastasio Alfaro, director of the National Museum of Costa Rica, to whom we are indebted for this information, were exhibited last year, 1892, in Madrid, Spain, and they there obtained as awards six first class medals. Señor Alfaro was also presented with honorable decorations.

#### EXPENSES, EXHIBITORS, JUDGES, AWARDS.

The expenditures of the exhibition in the Costa Rican Pavilion, including the cost of the building, service and transportation, exceeded....	\$100,000
And the installation of the section of archæology, at the Anthropological Building, service and transportation included, cost.....	10,000
<b>Total amount</b> .....	<b>\$110,000</b>

All the expenses were defrayed by the government, both on account of the character of the exhibition, consisting, as we have seen, mainly of natural products, and the desire to encourage the greatest possible number of individual exhibitors. The circumstances already referred to, namely the impending danger of cholera, and the consequent uncertainty as to the possibility of holding the Exposition at all, made the total number of exhibitors much smaller than it would otherwise have been.

According to the official catalogue of the World's Columbian Exposition, the number of the Costa Rican exhibitors was 363. Apart from the government, however, the number of individual exhibitors was, in fact, only 141, some of the exhibitors being represented in several different groups.

Of all the departments already mentioned, it is only in those of agriculture and ethnology that Costa Rica had judges of awards. They were, respectively, Señor Don Joaquín B. Calvo and Señor Don Manuel M. Peralta, who were indicated for the positions by the government of their country. Mr. Calvo was assigned to group No. 8, the most laborious of the Department of Agriculture. The Department of Ethnology was not divided into groups.

The following are the awards obtained by the exhibitors from Costa Rica:

DEPARTMENT OF AGRICULTURE.

GROUP NO. 1.

Cantón de Escazu,	San José,	Wheat.
Cantón de Santo Domingo,	Heredia,	Wheat.
Cantón de Paraiso,	Cartago,	Wheat.
Cartago,	Cartago,	Barley.
Zarcero,	Alajuela,	Barley.
San Pedro Calabaza,	Alajuela,	Indian Corn.
Valle de San Carlos,	Alajuela,	Rice.
Turrucares,	Alajuela,	Rice.
Piedras Negras,	San José,	Rice.

GROUP NO. 3.

Federico Tinoco,	Alajuelita,	Cane Sugar, Verbena.
Santa Ana,	Cantón de Mora,	Concrete Molasses,
Pio J. Fernandez,	Grecia,	Cane Sugar.
Ricardo Pfau,	San Pedro del Mojón,	Honey Exotic.

GROUP NO. 4.

Provincia de Cartago,	Costa Rica,	Vegetables.
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GROUP NO. 5.

Cantón de Liberia,	Guanacaste,	Beans.
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GROUP NO. 8.

Francisco Peralta,	San José,	Coffee.
Tournon & Co.,	San José,	Coffee.
San Pedro del Mojón,	San José,	Coffee.
Narciso Esquivel,	San José,	Coffee.
Cantón de Tres Rios,	Cartago,	Coffee.
Cantón de Aserri,	San José,	Coffee.
Gregorio C. Quesada,	Palmares,	Coffee.
J. M. R.,	Palmares,	Coffee.
Rafael M. Nora,	Palmares,	Coffee.
J. G. L.,	Palmares,	Coffee.
J. J. Morera,	Palmares,	Coffee.

Felix Vargas,	Palmares,	Coffee.
J. M. Rodriguez,	Palmares,	Coffee.
C. H. S. Taras,	San Nicolas,	Coffee.
L. Robles,	Navarro,	Coffee.
J. H.,	Cartago,	Coffee.
P. A. Badilla,	Heredia,	Coffee.
J. R. R. Troyo & Co.,	Cartago,	Coffee.
José Hidalgo,	Naranjo,	Coffee.
Alberto Saenz,	Heredia,	Coffee.
Municipio Naranjo,	Naranjo,	Coffee.
J. M. Solera,	Heredia,	Coffee.
Antonio Vargas,	Grecia,	Coffee.
David Guzmán,	Cachi,	Coffee.
Distrito de Orosi,	Cartago,	Coffee.
Cantón de Santo Domingo,	Heredia,	Coffee.
Fernando García,	Cartago,	Coffee.
N. Corrales,	Naranjo,	Coffee.
Sa tiago Alvarado,	San José,	Coffee.
Manuel Sandoval,	Alajuela,	Coffee.
Otto von Schroter,	San José,	Coffee.
A. and F. Gallardo,	San José,	Coffee.
Silverio Quiroz,	San Ramón,	Coffee.
Jesús Cruz,	San Ramón,	Coffee.
Juan Dent,	El Mojón,	Coffee.
Jesús Alfaro,	San Vicente,	Coffee.
Federico Tinoco,	La Verbena,	Coffee.
A. E. Jimenez,	La Uruca,	Coffee.
Ricardo Montealegre,	Las Pavas,	Coffee.
Virginia B. de Jimenez,	La Uruca,	Coffee.
Emanuel Jimenez,	La Uruca,	Coffee.
José Quiroz,	San Juan,	Coffee.
Teodoro H. Mangel,	San José,	Coffee.
Francisco Orlich,	San Ramón,	Coffee.
Edua do Sell,	San Ramón,	Coffee.
Fabian Esquivel,	San José,	Coffee.
Teodosio Castro,	San José,	Coffee.
José A. Coronado,	San José,	Coffee.
Juan Jenkins,	Atenas,	Coffee.
Barrio de Guadalupe,	San José,	Coffee.
Juan Vte. Acosta,	Grecia,	Coffee.
Ramón N. Gonzales,	Palmares,	Coffee.
Manuel Zamora,	Heredia,	Coffee.
José Zamora,	San Ramón,	Coffee.
Rafael Canas,	Matina,	Cocoa.

## GROUP NO. 9.

Cantón de Paraiso, Cantón de Liberia, Región de Talamanca,	Cartago, Guanacaste, Talamanca,	Collection of Fibers. Agave Fibers. Carludovica Palmata.
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## GROUP NO. 10.

San Carlos, Province of Cartago,	San Carlos, Costa Rica,	Thermal Water. Thermal Water of San Francisco.
Cantón de Escasu, Volcan Miravalles,	San José, Miravalles,	Sulphur Water of Santa Ana. Mineral Water of Rosa Verde.

## GROUP NO. 11.

Dr. David J. Guzmán, Fábrica Nacional de Licores,	San José, San José,	Whisky. Cordial, Rum and Cognac.
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## GROUP NO. 12.

B. Felice & Co.,	San José,	Black Beer.
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## GROUP NO. 16.

Augusto Gallardo,	San José,	Coffee Machinery.
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## GROUP NO. 17.

Government of Costa Rica,	San José,	Skins of wild animals tanned and dried.
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## GROUP NO. 18.

City of San Jose, Fabrica del Aguila, José Velazquez,	San José, San José, San José,	Oils (animal and vegetable). Stearine Candles of El Aguila. Stearine Candles of La José-fina.
Government of Costa Rica, Government of Costa Rica,	San José, San José,	Collection of medicinal plants. Collection of oils.

## FORESTRY, FOREST PRODUCTS.

## GROUP NO. 19.

San Carlos,	San Carlos,	Collections of coloring plants and barks.
Cantón de Liberia, Cantón de Nicoya, Valle de San Carlos, Cantón de Golfo Dulce,	Guanacaste, Guanacaste, Alejuela, Puntarenas,	Collections of gums and resins. Collections of gums and resins. Collections of gums and resins. Collections of gums and resins.



Cantón de Puriscal, Francisco Valverde,	San José, Heredia,	Collections of gums and resins. Collection of hard and orna- mental woods.
Miguel Pugno,	San José,	Mosaic collection of orna- mental woods.
Government of Costa Rica,	San José,	Collection of building cabiuet and dye woods.

## DEPARTMENT OF FLORICULTURE.

## GROUP NO. 22.

Costa Rica Government,	San José,	Collection of plants.
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## DEPARTMENT OF ANIMALS.

## GROUP NO. 34.

Museo Nacional de Costa Rica, Abelardo Borges,	San José, Alajuela,	Collection of birds. Butterflies of Costa Rica, Album.
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## DEPARTMENT OF FISH AND FISHERIES.

## GROUP NO. 37.

Government of Costa Rica,	San José,	Shells.
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## GROUP NO. 38.

Government of Costa Rica,	San José,	Implements for fishing.
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## DEPARTMENT OF MINES AND MINING.

## GROUP NO. 42.

Mina Gaudilar,	Puntarenas,	Auriferous quartz from Gau- dilar.
Campania Monte Aguacate, Government of Costa Rica.	Alajuela, San José,	Gold and Silver Ores. Collection of 74 Mineral Ores.

## GROUP NO. 44.

Government of Costa Rica,	San José,	Building, Stone, Marble, Ser- pentine, etc.
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## DEPARTMENT OF TRANSPORTATION.

## GROUP NO. 83.

Santiago Calvo, Cantón de Bagaces, Provincia de Cartago,	San José, Guanacaste, Cartago,	Saddle. Horse Hair Halters, etc. Saddle bags made of fiber.
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## DEPARTMENT OF MANUFACTURES.

## GROUP NO. 87.

José J. Jimenez,	San José,	Drugs and other preparations.
Carlos D. Brenes,	San José,	Drugs and other preparations.
León H. Santos,	San José,	Drugs and other preparations.
José F. Tristan,	San José,	Drugs and other preparations.
Macial Alpizar,	San José,	Drugs and other preparations.
José M. Ugalde,	San José,	Drugs and other preparations.
Enrique Iglesias,	San José,	Drugs and other preparations.
D. J. Guzmán,	San José,	Drugs and other preparations.
Dr. G. Michaud,	San José,	Chemical products.

## GROUP No. 96.

Francisco Valverde,	Heredia,	Several samples of carved wood.
G. & B. Quesada,	San José,	Silver shovel used in the inauguration of the Atlantic Railroad of Costa Rica.

## GROUP No. 98.

Andres del Valle,	San José,	Gold ornaments for the person.
José Angulo,	Puntarenas,	Gold ornaments for the person.
Julio del Valle,	Cartago,	Gold ornaments for the person.
Ramón Ortiz,	San José,	Gold ornaments for the person.
S. Federici,	La Union,	Ornaments.
Antonio Aguilar,	Puntarenas,	Gold covered ornaments.
Doña Ines Mencía,	Puntarenas,	Tortoise shells.
José Angulo,	Puntarenas,	Gold covered ornaments.

## GROUP No. 100.

Federico Velarde,	Heredia,	Silk Shawls.
Fábrica Herediana,	Heredia,	Silk Shawls.

## GROUP No. 106.

Elisa F. de Duran,	San José,	Embroidered handkerchiefs.
Catalina Fournier,	San José,	Embroidered portraits.

## GROUP NO. 118.

Foundry of San José,	San José,	Wrought Iron, Artistic Forging.
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## DEPARTMENT OF LIBERAL ARTS.

## GROUPS NOS. 149 AND 150.

Joaquín B. Calvo,	San José,	Geography, Statistics and History.
Inspector General of Public Education,	San José,	Statistics and other data.

Department of Education,	San José,	Photographs.
Museo Nacional,	San José,	Annals del Museo Nacional.
Ricardo Fernandez,	San José,	History of Costa Rica, etc.
Juan F. Ferraz,	San José,	Collection of Mexican Words.
Government of Costa Rica,	San José,	Pamphlets.
Vincente Lines,	San José,	Almanacs.
Imprenta Nacional,	San José,	Official Publications.
Dirección de Estadística.	San José,	Census Reports of Republic of Costa Rica.
Dirección de Estadística,	San José,	Census of Costa Rica, 1892.
Lorenzo Montufar,	Guatemala,	Walker in Central America
Manuel M. Peralta,	Madrid, Spain,	Books, Publications, Atlas, Maps.

## GROUP NO. 151.

Rudd & Paynter,	San José,	Photographs.
E. Fradin,	San José,	Hydrographic Surveying.
Fraucisco Valiente,	San José,	Photographs.

## GROUP NO. 153.

Government of Costa Rica,	San José,	Postage stamps, coins, etc.
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## GROUP NO. 158.

Maximo Morales,	San José,	Mandolin, Ornamental Woods.
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## DEPARTMENT OF ETHNOLOGY.

Julio de Arellano,	San José,	Musical instruments made of clay.
Anastasio Alfaro,	San José,	Catalogue of Archæological Collection at Madrid, 1892.
Dolores Pacheco de Troyo,	Cartago,	Grinding stone and stone stat- ues from ancient graves.
Museo Nacional de Costa Rica,	San José,	Gold, idols, jewels, ornaments found in ancient graves, household utensils, etc.
Right Rev. Bishop Bernardo A. Thiel,	San José,	Household utensils of aborig- ines, etc.
Francisco Montero Barrantes,	San José,	History and geography.
Ministerio de Fomento,	San José,	Paintings, maps of Costa Rica, etc.

## RECAPITULATION.

Number of exhibitors, according to the Official Catalogue.....	363
This number is represented as follows—	
By the government of Costa Rica.....	205
By individual exhibitors.....	158
Total .....	363
Individual exhibitors.....	141
Represented in various groups.....	17
Total .....	158
Number of awards .....	160
These awards were made as follows—	
To the government of Costa Rica.....	56
To individual exhibitors.....	104
Total .....	160

## II.

# RAILWAYS OF SOUTH AMERICA.

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The "Treatise on the South American Railways and the Great International Lines," prepared by the ministry of public works, Uruguay, and published at Montevideo, 1893, supplies a mass of valuable information. Great credit is due the government of Uruguay for undertaking so elaborate and exhaustive a work, which was awarded three medals at the World's Fair, Chicago. The author, Señor Juan José Castro, has collected the latest information and statistics of the workings of South American railways, and also of enterprises either in process of development or merely projected. A synopsis of this book of over 650 pages has been prepared and is given below.

The Bureau is requested by Señor Prudencio de Murguiondo, consul-general of Uruguay, at whose instance this synopsis has been prepared, to state that he will furnish copies of the work to those specially interested, upon application to him at 309 East North avenue, Baltimore, Md.

Señor Castro begins by calling attention to two great projects which may be said to dominate the railroad development of South America. These are the proposed Intercontinental Railway and the South American Interoceanic Railway. The object of the first-named line is to establish direct communication between North and South America from Canada to the River Plate and Chile. The surveys for this purpose have been going on for some time under the direction of the International Railway Commission, with headquarters in Washington, D. C. The second, or Interoceanic Line, is intended to shorten the time required for communication between the Pacific Ocean, the River Plate and Brazil and the European continent, and to open up new facilities for commerce between the countries through whose territory it will run

With reference to the Interoceanic Railway, it may be said that the project is one that is actually in process of consummation. The construction of that portion of the Transandine Line traversing the Chilean Republic is almost finished, as is also that in the Argentine territory, but there is considerable work still required to make the connection. For the section running through the Republic of Uruguay, the concession is granted, and the surveys have been completed. The survey for the Brazilian portion, from Pernambuco to San Luis, has been partly made.

Señor Castro's book treats of the following railway systems:

- I. Railways of Uruguay.
- II. Railways of the Argentine Republic.
- III. Railways of Brazil.
- IV. Railways of Chile.
- V. Railways of Paraguay.
- VI. Railways of Bolivia.
- VII. Railways of Peru.
- VIII. Intercontinental Lines.
- IX. Interoceanic Lines.

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### URUGUAY.

With reference to Uruguay, Señor Castro expresses the opinion that the importance of that country will in the future be much increased "as a necessary element for rapid and cheap communication with the countries situated beyond the vast Plate district." He thinks that the Uruguayan railways, from their general direction, will be of great international importance as a means to this end. The lines which radiate from Montevideo to the river Uruguay will spread across the Argentine system in order to reach Bolivia and Peru: by the line to Rivera, the shortest route will be found to Asuncion, to the eastern district of Bolivia, and to the proposed Intercontinental line. The lines which go toward Yaguaron and Lake Merim will shorten the time necessary for communication between Rio Grande, Pelotas, and Porto Alegre; lastly, the transverse line between Colonia and San Luis, as a section of the Interoceanic line from Recife to Valparaiso, will communicate on the one side

between the Argentine Republic and Chile, and on the other between the States of Rio Grande do Sul, Santa Catharina, Paraná, Sao Paulo, Minas Geraes, Bahia and Pernambuco, which will make this line of immense importance to the system to which it belongs.

According to a law of 1884, the lines which constitute the Uruguayan railway system are the following:

Central, Northeastern, Eastern, Western, Midland, Northwestern, Northern

The first four, which are the principal trunk lines, start from Montevideo and terminate, respectively, in Rivera, Artigas, Port Cebollati of Lake Merim, and Fray Bentos; the last three form the extensions from Paso de los Toros to Paysandú and Salto, from Salto to Santa Rosa, and from Isla de Cabellos to San Eugenio.

But, however, these lines, whose initial point is Montevideo, and which separate more and more from each other the further they get from the capital, were not in accord for the want of means of intercommunication, as for this purpose it was necessary to come to the converging point, unnecessarily running over long distances.

Besides, the general railway outline left a space of 400 kilometers on the Brazilian frontier, between Rivera and Artigas, without any direct communication with the capital.

Understanding the necessity for intercommunication between the trunk lines that run out of Montevideo and of a line to a middle point on the frontier between Artigas and Rivera, the executive power \* \* \* published the law dictated by the legislative body which granted the concession for the Interior of Uruguay Railway. This railway starts from the port of Colonia, opposite Buenos Aires and La Plata and runs to San Luis on the Brazilian frontier, forming junctions with the Western, Central and Northeastern lines; with the first named at El Perdido, with the second at Durazno, and with the third at Cerro Chato (Puntas del Yi). With this line, the general system of railways, of a uniform gauge of 1.44 m. between the rails, is complete.

The above system was adopted in accordance with the report by a committee of engineers which was appointed in 1872 to determine the trunk railway lines, which, starting from Montevideo, should cross the country in various directions and furnish rapid communication between the interior of the country, the capital and the Brazilian and Argentine frontiers, while forming at the same time a well combined plan of defense. The following statements will show the length in kilometers (one kilometer equals .6214 of a mile) of the railways of the Uruguayan system constructed, in course of construction, surveyed, and being surveyed, as also the capital authorized, the capital in-

vested in the lines, the guaranteed capital, the amount of the guarantees, the length of the system when completed, and the capital it will represent:

Railways.	Open, Kilo- meters.	Extension in Kilometers.			Total.
		In con- struction.	Sur- veyed.	Pro- jected.	
Central Uruguay (Montevideo to Paso de los Toros).....	272 880				
Central Uruguay Northern Extension (Paso de los Toros to Rivera).....	293.700				
Branches of Central Uruguay:					
(a) Veinte y cinco Agosto to San José.....	33.720				
(b) Sayago to Treinta y Tres...	8.000				
(c) Paso de los Toros to Fineryas saldero.....	1.000				609.300
Montevideo to Minas.....	122.615				122.615
Northeast Uruguay Railways:					
(a) Toledo to Nico Perez.....	206.200				
(b) Nico Perez to Melo and Artigas.....				305.000	
(c) Branch to Treinta y Tres.....				70.000	581.200
Uruguay Great Eastern Railways:					
(a) Olmos to Solis Chico.....	30.000				
(b) Solis Chico to Maldonado...		83.473			
(c) Maldonado to Laguna Merin.....			306.000		419.463
Midland Uruguay Railway (Paso de los Toros to Paysandu and Salto).....	317.775				317.755
Northwest Uruguay Railways (Salto to Santa Rosa).....	178.800				178.800
Uruguay Northern Railway (Isla Cabellos to San Eugenio).....	114.200				114.200
Northern Railway (Montevideo to Barra Santa Lucia).....	23.000				23.000
Uruguay Western Railway (Montevideo to Rosario and Colonia).....		223.883			
Rosario to Mercedes and Fray Bentos.....				194.000	
Branch from Perdido to Carmelo and Palmira.....				115.000	
Branch to Dolores.....				30.000	562.883



Railways.	Open, Kilo- meters.	Extension in Kilometers.			Total.
		In con- struc- tion.	Sur- veyed.	Pro- jected.	
Uruguay interior railways: Col- onia to San Luis (Brazilian frontier), passing through Perdido, Trinidad and Du- razno.....			580.891		
Branch to Cerro Chato.....			36.731		617.622
Loop line from Sauce Port to Rosario and San José (Lacaze concession).....			86.000		86.000
	1,601.840	*307.346	1,009.622	714.000	3,632.808

\* The construction of these lines is entirely suspended.

*Capital invested in the Railways on January 1, 1893.*

Railways.	Authorized capital.	Amount of capital invested.*
Central Uruguay and branches.....	£ 2,650,000	\$12,893,416
Central Uruguay, northern extension.....	1,666,666	7,821,803
Northeastern Uruguay (Toledo to Nico Perez).....	1,666,666	5,635,746
Montevideo to Minas.....	800,000	3,892,350
Uruguay Great Eastern (Olmos to Maldonado and Lake Merim)†.....		750,000
Midland Uruguay (Paso de los Toros to Salto).....		7,711,722
Northwestern Uruguay (Salto to Santa Rosa).....	1,410,000	6,860,370
Uruguay Northern (Isla Cabellos to San Eugenio).....	570,775	2,777,071
Northern (Montevideo to Barra de Santa Lucia).....		671,430
		49,013,908

\* One hundred dollars Uruguay gold are equivalent to \$103.52 United States currency.

† The capital of the Great Eastern, Midland and Uruguay Northern lines has been calculated on the kilomeric cost as fixed by the laws of concession for the payment of the guarantee.

*Railways opened to traffic with Government Guarantee.*

	Length in kilo- meters.	Kilo- metric cost.	Amount of capital guaranteed Jan. 1, '93.	Interest guaran- teed.	Total cost of guaran- teed ser- vice.
				Per cent.	
Central Uruguay, Northern extension: Paso de los Toros de Rivera.....	293,700	\$24,327	\$7,144,840	3½	\$250,070
Northeastern Uruguay: Toledo to Nico Perez. Montevideo to Minas.....	206,200	24,327	5,016,227	3½	175,567
Midland Uruguay: Paso de los Toros to Pay- saudu and Salto.....	88,317	24,327	2,148,487	3½	75,197
Northwestern Uruguay: Salto to Santa Rosa.....	317,775	24,327	7,631,512	3½	267,103
Uruguay: Northern Isla Cabellos a San Eugenio.....	80,257	24,327	1,952,412	3½	68,334
	114,200	24,327	2,778,143	3½	97,235
	1,100,419		26,671,621		933,506

There were, on January 1, 1893, 1,334 kilometers 747 meters opened to traffic with a government guarantee of 3½ per cent on a capital of \$27,505,989.

**ARGENTINE REPUBLIC.**

In the chapter which treats especially of the railways of the Argentine Republic, Señor Castro says:

In considering the railways of the Argentine Republic opened to traffic, in construction, or projected, there are noticeable in the whole network four great systems that run out of Buenos Aires:

(1) The Buenos Aires Great Southern Railway, with a total length of 1,878 kilometers, the main line running to the port of Bahia Blanca, distant 717 kilometers, from whence at a future date it is intended to be continued across the Rio Negro, Chubut, and Santa Cruz territories.

(2) The Buenos Aires and Pacific Railway to Valparaiso, of 1,221 kilometers, to the Argentine-Chilean frontier, this line forming a section of the Interoceanic line from the port of Recife (Pernambuco) to the port of Valparaiso.

(3) The Buenos Aires and Rosairo Railway running to Tucuman, and thence, in combination with the Central Northern Prolongation Railway, to Jujuy, distant 1,507 kilometers from the capital.

The Central Northern Prolongation will be continued to the Bolivian frontier and will thus form a principal line in the combination proposed with the railways of that country.

(4) The Santa Fé, Reconquista and Formosa route, intended to communicate with Asuncion (Paraguay), and of the total length of 1,216 kilometers to Formosa.

There are already constructed some 779 kilometers as far as Reconquista.

These four lines, by the districts which they traverse and the towns which they serve, form the great trunk lines of the Argentine railway system that connects with the capital, and they belong :

- (1) To the Buenos Aires Great Southern Railway Company (Limited.)
- (2) In three sections :
  - (a) Buenos Aires to Villa Mercedes, to the Buenos Aires and Pacific Railway Company (Limited).
  - (b) Villa Mercedes to Mendoza, to the Argentine Great Western Railway Company (Limited).
  - (c) Mendoza to the Chilean frontier, to the Trausandine Railway Company.
- (3) In two sections :
  - (a) Buenos Aires to Tucuman, to the Buenos Aires and Rosario Railway Company (Limited).
  - (b) Tucuman to Jujuy, to the Nation.
- (4) In three sections, of which the two constructed already belong :
  - (a) From Buenos Aires to Santa Fé, to the Buenos Aires and Rosario Railway Company (Limited).
  - (b) Santa Fé to Reconquista, to the Provincial Government of Santa Fé.
  - (c) Reconquista to Tucuman, to a separate company that will be formed to construct this line.

## RAILWAY ADVANCEMENT.

The first railway established in the Argentine Republic was the Western of Buenos Aires, the first section of which, ten kilometers in length, was opened to public traffic in 1857. The rate of railway development in the Argentine Republic annually has been as follows :

Kilometers.		Kilometers.	
1857.....	10	1880.....	2,315
1860.....	39	1885.....	4,541
1865.....	213	1890.....	9,255
1870.....	732	1892.....	12,990
1875.....	1,384		

*General Resumé.*

	Kilometers.
Railways open to public service.....	12,990.200
Railways, construction of which is being actively carried on.....	527.900
Railways, construction of which is partly stopped.....	500.400
Railways, construction of which is completely stopped.....	3,698.568
Railways surveyed.....	4,088.600
Railways under survey.....	61.000
Railways to be surveyed.....	7,793.700
<b>Total .</b> .....	<b>29,660,368</b>

*Capital represented by the railways of the Argentine Republic in the year 1892.\**

Andine .....	\$4,123,608
East Argentine .....	5,051,573
Buenos Aires and Rosario .....	41,185,753
Buenos Aires and Pacifico .....	16,251,818
Bahia Blanca and Northwestern .....	4,269,587
Buenos Aires and Euseñada .....	10,097,243
Central Argentine .....	49,172,613
Central Córdoba .....	4,824,932
Central Córdoba (Central Northern Section).....	20,262,446
Central Entre-Rios.....	13,293,613
Central Northern .....	13,623,964
Central Chubut.....	964,878
Chumbicha to Catamarca .....	2,219,220
Dean Funes to Chilecito .....	11,804,490
Great West Argentine .....	18,819,760
Great Southern of Santa Fé and Córdoba .....	4,363,434
Northwest Argentine (Tucuman to La Madrid).....	5,106,720
Northwest Argentine (Villa Mercedes to Rioja).....	1,874,377
Northeast Argentine.....	30,150,521
Western of Santa Fé.....	3,859,513
Western of Buenos Aires .....	30,322,423
First Entre-Rios.....	148,435
Provincial of Santa Fé.....	17,751,157
Southern .....	70,397,529
San Cristobal to Tucuman.....	7,439,666
Transandine .....	4,891,661
Villa Maria and Rufino .....	5,524,199

Total..... 397,684,593

The \$397,684,593 which represent the total of the Argentine railways are distributed as follows:

Railways belonging to the nation.....	\$31,919,719
Railways guaranteed by the nation.....	80,559,519
Railways belonging to provinces.....	18,233,597
Railways of private property .....	266,971,758

Total..... 397,684,593

The gross receipts of all the railways to January 1, 1891, amounted to \$55,417,555, as follows:

National railways.....	\$972,175
Provincial railways.....	2,964,075
Railways guaranteed by the nation.....	8,430,243
Private railways.....	43,051,062
Total .....	55,417,555

\*One hundred dollars (U. S. A.) are equal to \$103.64, Argentine gold.

The working expenses of all the lines to the same date amounted to \$37,852,768, as follows:

National railways.....	\$1,475,974
Provincial railways.....	2,563,940
Railways guaranteed by the nation .....	8,658,477
Private railways.....	25,154,377
<b>Total .....</b>	<b>37,852,768</b>

The profits and losses in the year 1891 amounted to \$19,028,833, distributed as follows:

	Profits.	Losses.
National railways.....	\$503,779	.....
Provincial railways.....	400,135	.....
Guaranteed railways .....	.....	\$228,234
Private railways.....	17,896,685	.....
<b>Total.....</b>	<b>18,800,599</b>	<b>228,234</b>

According to the office of accountancy and control of the general direction of railways, the guaranteed companies, in the year 1891, owed the government for guaranties considered to be unduly paid the sum of \$4,087,389, distributed among the companies as follows:

Buenos Aires and Pacific.....	\$1,584,672
Central Córdoba (Central Northern section).....	1,095,503
Great West Argentine .....	1,318,137
Transandine.....	15,220
Northeast Argentine.....	34,098
San Cristobal to Tucuman.....	2,081
Northwest Argentine.....	2,813
Villa Maria and Rufino.....	10,789
Bahia Blanca and Northwestern .....	24,076
<b>Total .....</b>	<b>4,087,389</b>

### BRAZIL.

The railways of Brazil are divided by Señor Castro into three groups, namely: The Northern, the Central, and the Southern. The first is laid in the States of Rio Grande del Norte, Parahiba, Pernambuco, Alagoas, Sergipe and Bahia; the second in the States of Minas

Geraes, Rio Janeiro and São Paulo; and the third in the State of Rio Grande do Sul. "In each one of these nuclei of railway net works," says Señor Castro, "the lines generally are of local importance and of one-meter gauge, although, however, some by the conditions and directions are destined to serve the general public traffic, among which we might cite the line from Recife to São Francisco in the future it would have when incorporated with the Interoceanic line in the State of Pernambuco; the Central Brazilian railway; the Santos and Jundiahy railway; and the principal line of Mogyana in the extensions proposed connecting with the lines running through the States of Goyaz and Matto Grosso as far as the Bolivian frontier."

Among the lines projected which may be regarded as international in character, Señor Castro mentions that of Santos; that from São Francisco to the Paraguayan frontier; and that from Recife to Valparaíso "which ceases to be a line of mere Brazilian importance when considered as of South American international character."

In 1852, the Brazilian government adopted a law providing guarantees and inducements for railway construction. At the present time, there are in Brazil 11,043 kilometers of railway in working order; 5,402 under construction; 5,175 surveyed; 4,414 being surveyed, and 13,826 yet to be surveyed.

"In view of the enormous size of Brazil," remarks Señor Castro, "and of its extensive coasts being provided with excellent ports, the first necessity was to open to each district its most natural and shortest exit toward the sea, without considering that at some more or less distant date these arteries might become united and form one single network; in this manner were established the three systems which we have indicated in order to meet the demands of the exporting and importing commerce of the interior of the country, affording an easy exit through its principal ports, which in the northern district are Pernambuco and Bahia; in the center district, Victoria, Rio de Janeiro and Santos, and in the southern, the mouth of the Rio Grande do Sul, its only exit to the Atlantic Ocean, and which is very badly qualified to serve the commerce of that state whose wants are chiefly supplied through the port of Montevideo and those of the River Uruguay (Salto and Concordia)."

"The population of Brazil, already some 15,500,000 souls, its enormous products and commerce, show the necessity for rapid and cheap

communication between its States and the interunion of these three independent systems of railways, and to gain this end, which will be of the greatest importance to Brazil, for many reasons, the public powers are allying themselves with private enterprise."

Señor Castro supplies the following table of Brazilian railways actually working in 1892:

State—	RAILWAYS.	LENGTH.
		Kilms.
Baturité.....		197.6
Comocin—Sobral—Ypú .....		216.6
Central Pernambuco.....		72.1
Palmares to São Francisco.....		146.4
Paulo Affonso .....		115.9
Alagoinhas to São Francisco.....		322.0
Rio d'Ouro.....		83.0
S. Amaro-Jacú .....		36.0
Central Brazilian .....		725.0
Central Brazilian .....		394.0
P. Alegre to Uruguayana .....		377.0
Guaranteed by the State—		
Natal to Nova-Cruz.....		121.0
Conde d'Eu.....		141.0
Recife—Palmares.....		124.7
Recife—Limoeiro—Tinbauba .....		141.1
Ribeirão to Bonito.....		22.0
Maceió—Imperatriz .....		150.0
Bahia—Alagoinhas .....		123.3
Alagoinhas—Timbo.....		83.0
Central Bahia .....		315.0
Nazareth Santo Antonio .....		34.0
Nazareth Tramroad .....		42.0
Caravellas Philadelphia (1887) .....		142.0
Itapemirim Alegre.....		70.0
Leopoldina.....		1,471.0
Minas and Rio .....		170.0
Western Minas.....		377.0
Juiz de Fora to Piauí.....		61.0
S. Isabel of the Rio Preto .....		74.5
Rosendo-Areas .....		28.4
Central Macahé .....		44.0
Ribeirão to Bonito.....		32.0
Mogyana (main line, 1887).....		740.0
Bragantina.....		52.0

Sórocabana .....	376.0
Paranaguá—Curityba—Lapa .....	231.0
Thereza-Christina .....	116.0
Rio Grande to Bage.....	283.0
Quarahim to Itaquí.....	173.0
Unguaranteed—	
Recife—Caxangá .....	20.0
Macahé—Campos .....	96.0
Santo Antonio de Padua.....	92.7
Rio de Janeiro to Mage.....	88.0
Principe do G. Pará .....	91.7
Santos to Jundiáhy .....	139.0
Ituana (1886).....	283.0
Paulista .....	242.0
Rio Claro.....	264.6

The most important of the Brazilian railway lines is the Central Brazilian railway which has become the artery for the great system of railway lines converging from right to left toward its own, "which," says Señor Castro, "makes it what the law of 1852 intended it to be, namely, the great factor in the development of the states of Rio de Janeiro, Minas Geraes and São Paulo."

### CHILE.

Señor Castro gives a synopsis of the railroads of Chile for the year 1891, which shows the railroads opened to public service, as also those in construction up to that time. The state railways are divided into three sections as follows:

	Kilms
First. From Valparaiso north to the bank of the Mapocho, including the branches from Las Vegas to the Andes, and from Boron to the Port.....	228
Second. From the Mapocho to the Talca station, including the branches from Tungay to Mercado, and from Tinguiririca to Palmilla.....	296
Third. From Talca to Victoria, including the Los Angeles, Traiguen and Talcahuano branches.....	582
Total .....	1106

The private railways are the following, commencing with the North:



	Klms.
From the port of Arica to the city of Tacna .....	63
From the port of Pisagua to Tres Marias, ninety kilometers, and branches to Agua Santa and Puntunchara and sidings, together ...	106
From the port of Iquique to Tres Marias, 109 kilometers, to Virginia thirty-one kilometers, branches to stores and sidings, total .....	194
From the port of Patillos to Salitreras del Sur .....	93
From the port of Mejillones del Sur to the Cerro Gordo mine.....	29
From the port of Antofogasta, via Salinas de Dorado, to the town of Calama, and thence toward the east in the direction of the borax deposits of Ascotan on the borders of Bolivia, into the interior of which country the line should continue for a few kilometers to the rich silver mine at Huanchaca .....	440
From the port of Taltal to Cachiyuyal or to Refresco .....	82
From the port of Caldera to Copiapo, branching out from thence to the Puquios mines, San Antonio de Apacheta, and to Chuarcillo or to Juan Godoy.....	242
From the port of Carrizal Bajo to Carrizal Alto, via Barranquilla and Canto del Agua, thirty-six kilometers, and from thence another forty-five kilometers eastward to the Cerro Blanco mine.....	81
From the port of Coquimbo to the city of la Serena y la Compania .....	15
From the same port to the city of Ovalle with a branch to Panulcillo.....	123
From the port of Serena to Elqui or to the town of Rivadavia, to the east of the city of Vicuña .....	78
From the port of Tongo to the Tamaya mine.....	55
From the port of Laraguete, in the bay of Arauco to the coal mines of Quilachauquin and Maquegua.....	40
From the city of Santiago to Pirque .....	21
	1,662

There are also some other short railways which serve the coal mines of Coronel, Lota, Lebu, etc., and a tram or railway worked by animal power, six to eight kilometers long, between the port of San Antonio and Boca de Maipo.

In the cities of Santiago and Valparaiso, there are convenient tramways, of over sixty kilometers long in the first named and a little over ten in the second.

The same service has been established in the cities of Concepcion, Copiapo, Chillan, Rengo, Quillota, San Felipe, Santo Rosa, Serena, Talca, etc.

#### RAILWAYS IN CONSTRUCTION.

The following statement will give the name and length of the lines being constructed, and the gauge of each:

Name of Line.	Length. Gauge.	
	Kilms.	M.
From Huasco to Vallenar.....	49.1	1.00
From Vilos to Illafel y Salamanca .....	120.0	1.00
From Calera to Ligua .....	71.5	1.00
From Santiago Melpilla .....	59.0	1.68
From Pelequin to Peumo.....	28.1	1.68
From Palmilla to Alcones.....	44.0	1.68
From Talca to Constitucion.....	84.6	1.00
From Parral to Cauquenes.....	49.4	1.68
From Coihue to Mulchen.....	41.4	1.68
From Victoria to Tolten.....	106.0	1.68
From Valdivia to Pichi-Rapuli.....	95.0	1.68
From Pichi-Ropulli to Osorno.....	70.0	1.68

Of the line from Santiago to Melipilla, the section between the former city and Chinihue, 48 kilometers long, is open to traffic, as is also the part as far as the river Cachapoal, 18 kilometers long, of the Pelequen-Peumo line.

### PARAGUAY.

Railway construction in Paraguay, according to Señor Castro was commenced in June, 1859. It was intended that the line beginning at Asuncion should terminate at Villa Rica. The first section was constructed under the direction of engineer Padison and reached to the Paraguari, a distance of 72 kilometers from Asuncion. The surveys for the second section were made by Messrs. Valpy and Burrel, and the works were about to be commenced when war broke out and temporarily prostrated the country. Until 1888, the work was entirely suspended. The government then annulled the concession that belonged to the private firm and ordered the continuation of the work. This was intrusted to Don Luis Patri, "one of the richest capitalists in Paraguay," and from that time, the work was pushed with great activity under the direction of the French engineer M. Gil Regnault, and the section as far as the station General Caballero, situated on the other side of Ibitury, has been opened to public traffic.

The government has resolved to sell the line, and an English company has recently taken it on condition of prolonging it to Vil

Encarnacion, situated on the banks of the Parana, on the southern boundary of the Republic. The line should be completed this year, 1894, and will establish communication with the Argentine railway in course of construction between Monte Caseros and Posadas. The line thus extended will place Paraguay in communication with the Argentine provinces of Corrientes and Entre Rios, as also with the port of Montevideo, via Concordia, Salto and Durazno. There still remains to be built, in order that the line may reach Encarnacion, a distance of 135 kilometers, which will give the road a total length of 387 kilometers.

The English Company which has undertaken the completion of the road is known as the Central Paraguay Railway Company. The National Congress has authorized other concessions for railways destined to cross the country in various directions.

The Central Paraguay Railway is regarded by Señor Castro as of great importance, likely to be in the future an element of quick communication between the River Plate and Paraguay, when the Argentine line to Posadas shall have been constructed, and the extension of the Central Uruguay Railway from Rivera to San Borja is carried out. It will also form a junction with the Intercontinental trunk line and will establish communication between Uruguay, the State of Rio Grande do Sul, Brazil, and part of the Argentine Republic and Bolivia and Peru.

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### BOLIVIA.

The railway system of Bolivia, according to Señor Castro, is as yet mostly projected, only one line having been constructed up to the present. This establishes communication between the interior of the country and the port of Antofagasta on the Pacific. It runs across the territory of Bolivia from Ascotan, a point on the frontier of Chile, to Oruro, and is 923 kilometers long. For its construction, an economical type of road was adopted of .75 meter gauge, trains being able to travel without danger at a maximum velocity of fifty kilometers per hour. The construction of this line has been completed within a recent date, the line having been opened as far as Oruro on the 15th of May, 1890. The length of the railway from Yuni to Oruro is 315 kilometers. The branch to Pulacayo and

Huanchaca, principally intended for the transport of metals belonging to the Huanchaca Company, does not belong to the public.

A number of concessions have been granted for the construction of railways in Bolivia, among them one from the present road to Colquechaca, to develop the mineral resources of that district; another for a road to connect the departments of Oruro and Cochabamba, intended to develop existing commercial relations between the central agricultural districts of the country and the fertile valleys of the department of Cochabamba, the length being about 200 kilometers; third, a branch road from Uyuni to Potosi, being from 225 to 230 kilometers in length; fourth, a road from the city of Cochabamba to the banks of the river Mamore, or one of its tributaries in the department of Beni, together with a concession of 100 square leagues of State lands, in alternate lots of ten leagues each, on both sides of the line, for the establishment of colonies and agricultural settlements; fifth, a grant to Perry Cutbill & Co. of London for the construction of a road in the eastern portion of the Republic; sixth, the right to construct railways and tramways from the banks of the Desaguadero and Lake Poopo to populated centers and mining districts, granted to Juan L. Thorndike, and extended for twenty years from January 1, 1890; seventh, an extension of the line from Oruro to the city of La Paz, to complete the Bolivian Central Railway, and provide transportation to foreign markets by the Desaguadero and Mollendo to the north, and by Antofagasta to the south; eighth, a grant to the English company known as "The Peruvian Corporation, Limited," for the construction of a railway from La Paz to the Peruvian frontier, the concessionaires undertaking to make a junction between the line from La Paz to Desaguadero and the one from Puno to Mollendo.

From a report of one of the cabinet ministers of Bolivia, August 27, 1892, Señor Castro quotes as follows:

"In former reports I had the honor of pointing out to you the convenience of negotiating for the extension of the Argentine Central Northern Railway to the southern provinces of this Republic.

"Now that the Bolivian table land railway borders on the neighboring country, I must again make mention of that undertaking of such incalculable importance, both to the honorable members of Congress and to the government that initiated it.

"In the future destinies of the country, the realization of this stu-

pendous work will render our international relations closer, supporting them by ties of common interest, without the inconveniences attending the Magellan and Panama routes.

"The prolongation of the Plate lines by the Santa Catalina frontier to the point of bifurcation in Uyuni, crossing the province of Lipez, will realize, at no distant time, one of our greatest hopes.

"Now, notwithstanding our political disturbances, that the road is opened to this class of undertakings by the initiative taken by the Huanchaca Company of Bolivia, who subguaranteed the capital invested in the construction of the railway from Uyuni to Oruro, and once confidence is re-established in the promises of the government, we can reasonably look for a radical change in our financial condition.

"Those countries which, on account of their natural limits, are shut in and live almost completely isolated from the contiguous States, have no unity of ideas or interests with their neighbors, and do not understand any other life than that of a purely local existence. Every government can combat and overcome this inconvenience by opening easy roads of communication, by whose beneficent influence the hidden valley is brought into view, and enters into relations with the neighboring lands, and its inhabitants form part of one great family, from which, up to then, they had been separated. The iron roads and the electric telegraph will finish by triumphing over time and space, which in the Middle Ages were very powerful agents of the dismemberment of the land and of the want of unity in the government."

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### PERU.

"Among the States of the American Continent," says Señor Castro, "Peru has had to pay the highest contribution of all to carry out the construction of her railway system.

"In the railway system extending from the Pacific coast to the interior of the country, climbing the mountains of the Andes and crossing one of the most rugged districts in the world, the works have always had to be made in the face of the greatest difficulties.

"On June 30, 1850, Don Ramon Castillo laid the foundation stone of the first railway in South America, on the line from the port of

Callao to the city of Lima, opened to traffic on April 5, 1851, being fourteen kilometers in length.

Following this, the line from Arica to Tacna was completed by Mr. Egan, and then those from Ica to Pisco and from Iquique to Noria; but it was during the administration of Colonel Baltas, from 1868 to 1872, that the railway industry received its great impulse, the construction of nineteen lines being commenced that it was intended should extend 2,500 kilometers, and of which more than half were completed before the war of 1880, the consequences of which paralyzed these works, which were of solid progress to Peru.

According to Engineer Bresson, the average cost of the Peruvian railways is, more or less, \$100,000 per kilometer, an enormously high figure, only explained by the railway system covering one of the most rugged districts in the world, and by the concessions, favors and special grants made to attract the capital required for such great works.

Reviewing the Peruvian railway system, there are three lines which stand forth as of first class; the first is the Transandine, running from Callao in the direction of Lima, Oroya and Cerro de Pasco; the second establishes communication between the port of Mollendo and Arequipa, Juliaca, and Puno; the third, starting from Juliaca, runs to Cuzco through Pucara, Santa Rosa, and Sicuani: this line, from the direction it runs, being one day destined to be the Peruvian Central Railway, from which the whole railway system will branch off."

Of these roads, the most noted is the Callao and Oroya railway, of which Señor Castro gives the following sketch:

"This line runs from the port of Callao to the Monserrate station in Lima. After a run of twelve kilometers, it climbs the mountains on the banks of the River Rinac until it reaches the San Pedro Mauna station, in kilometers 53.340, with minimum gradients of 3 per cent. From this point on, the rapid ascent is made with gradients of 3.85 per cent and 4.43 per cent, for which reason heavy engines are employed capable of overcoming these very heavy gradients.

The station Cochaira is found in kilometer 75. Chicha in kilometer 160 and Oroya is reached in kilometer 209 from Callao. \* \*

"The engineer-in-chief of this important line was Don Enrique Meiggs. It is one of the most notable in the world. In a distance of 200 kilometers it rises to a height, not reached by any other railway, of 4,779 meters, Mont Blanc only being 4,809 meters high.

"With these extraordinary works, there would be opened to commerce and agriculture entirely virgin districts which, once placed in communication with the Pacific ports on one side and with those of the Amazon on the other, would have constituted new sources of wealth for Peru; but financial difficulties in that country have delayed the termination of the magnificent proposal of Meiggs.

"Engineer Bresson, in his work 'Bolivia,' edited in Paris in 1886, says: 'One of the curiosities of the Oroya railway is the Verrugas bridge, an immense viaduct crossing a torrent of 175 meters wide by means of an iron span supported by three pillars, one of which is 90 meters high or one and one-half times the height of the towers of Notre Dame in Paris.'

"The line of this singular railway runs nearly always on a gradient of .03m. or .04m. per meter; the level or straight stretches being the exception. Indeed, gradients and curves constitute the general condition of road that, from time to time climbing the zigzag or running through tunnels, comes out on imposing precipices terrible in their grandeur. Many times, the line appears like a cornice on the sides of the Andes—on one side the precipice, and on the other a perpendicular wall of rock towering above the aerial road."

The following is Señor Castro's statement of the railways of Peru, with distances:

## NORTHERN SYSTEM.

	Kilms.
From the port of Paita to Paura, the capital of the Department, passing through Colon, La Huaca and Sullano.....	96 000
From Paura to Sechura, open as far as Catacaos.....	.....
From the port of Elen to Terrenafe, passing through Monsefu, Chiclayo and Lambayeque.....	43.492
Branch from Chiclayo to Patapo.....	24.901
From Lambayeque to Pimintel, of which there are constructed only.....	25.000
From Pascamayo to Magdalena and Cajamarca.....	179.000
From Salaverry to Trujillo.....	11.000
From Trujillo to Ascope.....	78.000
From Chimbote to Huaraz and Ramay, constructed as far as Suchunan.....	55.000

## CENTRAL SYSTEM—1.435M. GAUGE.

From Callao to Lima, passing through Barranco and Miraflores.....	14 000
From Lima to La Magdalena del Mar.....	7.000
From Lima to Chancay, open as far as Ancon.....	33.000

From Callao, Lima, Oroya and Cerro de Pasco, line open as far as Oroya .....	209,000
From Pisco to Ica .....	74,000

## SOUTHERN SYSTEM—1.435M. GAUGE.

From Mollendo to Arequipa.....	172,000
From Arequipa to Vinocay, Juliaca, and Puno.....	351,000
From Puno to Cuzco, open as far as Sicuani.....	200,000

Total .....	1,572,393
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“In the year 1886, the Peruvian Government contracted with a North American company for the prolongation, as far as Cerro del Pasco, of the railway from Callao to Oroya. The termination of this line will give a great industrial impetus to Peru. The working of the silver mines of the Cerro del Pasco, renowned for the abundance and good quality of the ore will be developed as they merit, in view of the immense values they represent.

“The extension of other railways has also been contracted, among which are: The Trujillo, Chimbote and Cuzco lines.”



### III.

## MINING EXPOSITION IN CHILE.

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The Bureau of the American Republics has received through the Department of State the following dispatch from the Hon. James D. Porter, United States Minister to Chile :

"I am requested by the Sociedad Nacional de Minería to inform my countrymen interested in the subject, that the opening of the Chilean National Mining and Metallurgical Exposition—mentioned in my dispatches numbered 33, 34 and 42 has been postponed by decree of the Supreme Government until September next, the day to be fixed hereafter, and of which timely notice will be given.

"The postponement will not interfere in the meantime with the reception and care of the articles destined for the exhibition, as the society will receive from this time on and take charge of all such objects as may be sent by exhibitors.

"The postponement has been decided upon by the government at the instance of its diplomatic representatives in Europe, as well as of many of the Chilean mining and manufacturing industries. They think it would be impracticable for the European exhibitors to prepare and send their exhibits within the short interval intervening before the time as originally announced, and that a postponement will give opportunity for more thorough preparation by the government and the society.

"I suggest that the fact of postponement be given to the press by the Department for the benefit of all persons in the United States who purpose taking part as exhibitors or otherwise."

Information as to the proposed exhibition was published by the Bureau of the American Republics shortly after the announcement last fall that it was to be held, and a brief statement of its character and purposes was given in the Bureau Bulletin for November, 1893, page 19.

The official program of the exhibition transmitted by Minister Porter, is as follows:

#### EXHIBITION OF MINING AND METTALLURGY.

An exhibition of mining and metallurgy will be opened in the Quinta Normal de Agricultura, Santiago, in the second fortnight of April, 1894 (since postponed to September, 1894.) The exact date of opening and closing will be made known opportunely by the minister of industry and public works.

The exhibition will be divided into the following sections:

##### FIRST SECTION—MOTIVE POWER.

- (a) Steam, petroleum and gas engines.
- (b) Pelton wheels or similar apparatuses for utilizing small quantities of water from a great height.

##### SECOND SECTION—ELECTRICITY.

- (a) Dynamos for transmission of mechanical force for lighting and for electrolysis.
- (b) Electromotors and electric winches.
- (c) Electric drills.
- (d) Pails for electrolysis and the materials employed in its preparation.
- (e) Pumps and special injectors to move electrolytes.

##### THIRD SECTION—MINING MACHINERY.

- (a) Winding machinery.
- (b) Air compressors.
- (c) Drills worked by compressed air.
- (d) Boring machines.
- (e) Mining pumps.
- (f) Tools and accessories used in mines: Ventilating apparatuses, life-saving apparatuses, lamps, etc.
- (g) Strong explosives for mining purposes.
- (h) Apparatuses for the conveyance and loading of minerals; Aerial tramways, portable railways, etc.

##### FOURTH SECTION—MECHANICAL PREPARATION OF MINERALS.

- (a) Crushing and pulverizing machines.
- (b) Concentrating machines—by means of air and by means of water.

##### FIFTH SECTION—METALLURGY.

- (a) Smelting, calcining and roasting furnaces.
- (b) Metallurgical and industrial treatment of copper, zinc, lead and tin.

- (c) Small installations for the hydrometallurgical treatment of copper.
- (d) Small installations for the treatment of gold ore by cyanide of potassium, by mercury, etc.
- (e) Methods of lixiviation.

## SIXTH SECTION—CHEMICAL INDUSTRIES.

- (a) Manufacture of sulphuric acid, Barbier apparatuses, etc.
- (b) Apparatuses used in the extraction of nitrate, other salts and iodine.
- (c) Laboratory utensils and reagents.

## SEVENTH SECTION—STATISTICS AND PLANS.

- (a) Scientific instruments used in mining.
- (b) Plans.
- (c) Models.
- (d) Catalogues.
- (e) Statistical data.

## EIGHTH SECTION—MINING AND METALLURGICAL PRODUCTS.

- (a) Collections or samples of rocks, minerals, ornamental rocks, hard rocks, refractory materials, earths and clays, miscellaneous mineral products, native sulphur, rock salt, salt from salt springs.
- (b) Mineral and vegetable fuel, coals, residuums and agglomerates, asphalt, and asphaltic rocks, pitch, mineral tar, raw petroleum.
- (c) Ores in the rough; copper, lead, silver, zinc, etc.
- (d) Products obtained from ores in the rough.

## CONDITIONS.

ART. III. Chileans and foreigners alike may take part in the Exhibition, and exhibitors will be required to submit to the regulations, which will be opportunely published.

ART. IV. The government will convey gratis to the Exhibition all articles comprised in the preceding classifications which it may be desired to exhibit.

The government will also pay the passage money by sea and land of the workmen and operatives whom exhibitors may bring out for the purpose of setting up and running the machinery and apparatuses they may exhibit.

ART. V. Exhibits from the time that they are entered at the custom-house will be considered as in private bond—that is to say, for the duties to which they are liable, twelve months' promissory notes must be signed, which will be canceled if within that period the said exhibits are reshipped for abroad. If not, the respective duties must be paid to the custom-house.

ART. VI. There will be three classes of awards, which will consist of first, second and third-class medals, which will be accompanied with diplomas signed by the minister of industry and public works, and by the president and secretary of the Sociedad Nacional de Minería (National Mining Society).

ART. VII. The organization of the Exhibition is confided to the directory of the Sociedad Nacional de Minería, which will be presided over by the minister of industry and public works, whenever this functionary attends its meetings.

ART. VIII. The directory of the Exhibition will draw up the regulations which may be necessary for the proper discharge of their duties, which must be submitted to the approval of the government before they are put in force.

SUPPLEMENTARY DECREE.

A supplementary decree provides that the Sociedad Nacional de Minería shall receive and take charge of the exhibits.

Applications for space by foreign exhibitors must be presented to the Chilean legations in Paris, London, Berlin, Washington, Lima, Rio Janeiro and La Paz, accompanied with plans and specifications of the exhibits and a statement of the number of operatives they desire to send for the erection and running of the exhibits.

The exhibits must be in Valparaiso or Santiago not later than March 15, 1894. [This date has doubtless been changed in consequence of the postponement of the exhibition to September, 1894.]

The Directory oblige themselves to pay the freight out and back again, by sea or land, of the exhibits; and also the passage-money out and back again of the workmen and operatives brought out for the installation and running of the exhibits.

Exhibitors will defray the cost of installation of their exhibits, but the Directory will provide tables and show cases for collections, plans and instruments.

The Directory will provide motive power for the machinery and apparatuses, and the minerals for experimental trials.

The Directory will not be responsible for loss from fire, or other unforeseen accidents.

The Directory will not respond for the loss or deterioration of exhibits which may not have been withdrawn within one month after the day fixed for the closure of the Exhibition.

The classification of the exhibits and the awards of prizes will be made by juries appointed by the Directory.

Each jury will be composed of three Chileans and two foreigners, and will be presided over by one of the members, who shall be elected by a majority of votes.

No jury can act unless three of its members be present, and in this

case their decision will not be binding unless they are unanimously of the same opinion.

If three only of the members of a jury should be present, and they should disagree in opinion, the other two members shall be cited to appear in order to arrive at a decision.

In case of absence or inability to attend of any of the members of a jury the Directory will appoint substitutes.

Exhibitors will be entitled to appeal from the decisions of the juries to the Directory, to which will be added the president of the respective jury.

In a previous dispatch to the Department of State, Minister Porter said: "The president of the society has written to me asking my good offices in the promotion of the enterprise, and I have promised to bring the subject to the notice of my Government, in the belief that it would assist in giving publicity to the proposed exposition and thereby invite the attention of such of our citizens as might desire to participate in it as exhibitors or otherwise. I think the recognition of this National Exposition in some way by our Government would be greatly appreciated by the Chilean government and people, and that substantial facilities offered our citizens wishing to exhibit mining machinery, etc., might not only promote the success of the Exposition, but also prove beneficial to some of our important manufacturing industries. I inclose the official publication entitled 'Lei i decretos supremos que organizan una Esposicion de Minería i Metalurjia en Santiago de Chile en 1894,' and especially call attention to the 'Programa' pages 4-6, showing the scope of the exhibition and the character and variety of the machinery and processes to be exhibited. It will be readily seen that the manufacturers of such machinery in the United States have in this an opportunity of presenting their improved methods and instruments under the most favorable conditions for their introduction into the country."

IV.

## CURRENCY CHANGES IN CHILE.

The Bureau of the American Republics is informed that the following decree has been issued from the Ministry of Finance of Chile:

SANTIAGO, December 24, 1893.

Considering—

That the act of November 26, 1892, provides that 25 per cent of import duties shall be paid during the current year in gold at the rate of \$6.31 per pound sterling;

That in order to facilitate the fulfillment of this obligation, it was provided that the portion of the duties payable in gold might be paid in good bills on London;

That the Superintendent of the Mint has been authorized to purchase all the gold that may be offered him, paying for it in pounds sterling.

That this kind of money has, at present, no other use than the payment of import duties, and that for this cause it suffers a depreciation in the market with respect to bills drawn on Europe;

That it suits the state to receive the import duties in metallic currency, because with it, it economizes in the expenses of bringing gold to Chile;

I hereby decree:

The Direction of the Treasury shall exchange at par the gold that may be offered to it for bills on London at ninety days' sight, proceeding from the 25 per cent of the import duties that may be paid in this form.

Let it be noted, etc., etc.

MONTT,

ALEJANDRO VIAL.

The Chilean government has presented to Congress a bill to amend the Conversion Act, as follows:

Article 1. The 25 per cent of the import duties and storage dues payable in gold or in good bills on London, according to the acts of November 26, 1892, and of May, 1893, shall be paid in the equivalent of legal-tender currency in the form provided in the act of December 31, 1888.

Article 2. The 50 per cent of the export duty on nitrate, imposed by the act of October 1, 1880, shall be paid in good bills on London at ninety days' sight, and the duty for this effect shall be paid at the rate of 60.8 pence per 100 kilograms.

Sixteen per cent of the export duties payable in bills in conformity with the provisions of the preceding article shall be applied to the amortization of the

government paper money, in the form prescribed in the acts of November 26 1892, and of May 31, 1893.

Article 3. The President of the Republic is empowered to purchase, when he considers it advisable to do so, sufficient silver bullion to coin, together with the existing stock of bullion belonging to the nation, up to \$8,000,000 in the coins created by the act of November 26, 1892.

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V.

## IRON ORE AND MANGANESE IN CUBA.

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The following is taken from United States Consular Reports for February, 1894:

The principal iron mines of Cuba are between Santiago and Guantanamo, along the southeastern coast of the island, within a radius of fifty miles. Three American companies—the Juragua, the Sigua and the Spanish American—have, in the aggregate, invested about \$12,000,000 in plants to develop these mines. Several additional millions of American capital are invested in ships which transport the ore from Cuba to Baltimore, Philadelphia, Perth Amboy and New York.

During the year 1892 the amount of ore shipped from this consular district was 341,050 tons, and for the first six months of the present year the amount was 273,000 tons. Two of the three companies—the Sigua and the Spanish American—have shipped thus far very little ore, having not much more than established their plants when the late financial depression in the United States caused the mines to shut down.

The ore from the Cuban mines yields from 60 to 67 per cent of pig iron. But the value of iron ore does not depend alone upon the percentage of iron that it will yield, but also upon the nature of the foreign substances which must be eliminated. These foreign substances are usually sulphur, silica, phosphorus, manganese, alumina, lime, magnesia, together with organic and volatile matter. The Cuban ore is peculiarly free from all foreign substances except organic and volatile matter, which are easily and cheaply eliminated.

Manganese, which is used in the manufacture of steel, is also found in an unlimited supply in the same mountain range of Cuba in which the iron ore is found, but between Santiago and Manzanillo, within a distance of seventy-five miles. American enterprise has also asserted itself here by capturing the richest and most available mines. These mines are now being connected with the seaboard by short-line railroads.

During 1892 there were shipped to the United States from this consular district 18,851 tons of manganese, and during the first six months of the present year the amount transported was 11,640 tons.

I am reliably informed that immense quantities of manganese have been discovered in the Caucasus Mountains, between the Black and Caspian seas, and that European capitalists claim that they will be able to deliver manganese in Baltimore at \$9 per ton. Cuban manganese has been delivered there the past year at an average cost of about \$15 per ton. With the rich deposits of the Ponupo and other mines recently discovered here, the completion of railroad connections with the coast, and the addition of improved machinery now being put up, those interested in the Cuban mines confidently assert their ability to undersell the Europeans in the American markets. The decreased price of manganese will make available many Pennsylvania iron mines which it does not pay to work at present.

PULASKI F. HYATT, *Consul.*

SANTIAGO DE CUBA, *December 11, 1893.*

## VI.

# COMMERCIAL AND INDUSTRIAL INFORMATION.

### ARGENTINE REPUBLIC.

The new wheat crop of the Argentine Republic is said to be an abundant one. It is expected that the surplus available for export will be largely in excess of the exportation last year which amounted to over 1,000,000 tons. The wool clip is also said to be heavy.

The final settlement of the frontier question with Chile has given



much satisfaction in the Argentine Republic as it puts an end to the controversy which was a cause of anxiety for both nations. "The immediate result," says the Buenos Aires Standard, "will be the establishment of numerous farms along the eastern slope of the Andes, from Neuquen to Chubut, to provide the Chilean markets with cattle, as heretofore settlers were deterred by the apprehension that any rupture with Chile would expose that part of Argentine territory to devastation."

About \$55,000,000 gold is said to be the aggregate invested in the wine industry of the Argentine Republic. The culture of the vine is carried on most extensively in the provinces of Mendoza and San Juan, and the industry is also being developed in Rioja, Buenos Aires, Catamarca, etc. The following figures as to the industry are given by the Buenos Aires Standard:

	Vineyards.	Capital.
	<i>Acres.</i>	<i>Gold.</i>
Mendoza .....	40,000	\$20,000,000
San Juan.....	30,000	15,000,000
Rioja.....	16,000	8,000,000
Buenos Aires.....	16,000	8,000,000
Catamarca, etc.....	8,000	4,000,000
Total.....	110,000	\$55,000,000

The same paper furnished the following data with respect to the industries of the Republic.

	Capital.	Gross yearly product.
	<i>Gold.</i>	
Sheep farming.....	551,000,000	77
Cattle.....	275,000,000	39
Tillage.....	144,000,000	86
Vineyards.....	55,000,000	8
Railways.....	390,000,000	24
Sundries.....	992,000,000	183
Total.....	2,407,000,000	417

A severe drouth has recently prevailed in the Argentine territory, causing damage to the pastoral interests.

It is said that negotiations are in progress for the conclusion of a commercial treaty between Argentine and Chile.

A co-operative store, on the lines of the United Service stores in London, is in successful operation at Chubut, Argentine Republic. It is stated that practically nearly every farmer in the colony is a member of it, delivering his wheat to the store at his convenience and drawing goods or cash as he may require. Nearly four-fifths of the trade of the colony is done in this manner. The company was only registered and its statutes approved in December, 1892, though it had been in existence six years. It has a board of directors of twelve members and a manager elected for a term of years.

#### BOLIVIA.

The Bolivian government is understood to be in treaty for the construction of a network of railways, 1,910 miles in length, connecting the cities of La Paz, Oruro, Cochabamba, Chupuisaca, Potosi, and Santa Cruz with one another, and also with the river Paraguay on the east and the Peruvian port of Tacna on the Pacific. The proposed lines would be:

	Miles
Santa Cruz to River Paraguay.....	360
Santa Cruz to Cuyaba.....	260
Santa Cruz to Cochabamba.....	380
Branches to Potosi, etc.....	240
Tacna to La Paz.....	250
La Paz to Cochabamba.....	270
Cochabamba to Beni.....	150
Total.....	1,910

The country is mountainous, and the cost of construction is put down at £10,000 per mile, the total estimated cost being £19,000,000. At present, the Republic has only one line, from Oruro to the Chilean frontier, 240 miles in length. The government is asked to give a grant of land 30 miles wide on each side of the projected lines, and with such a concession it is considered that the capital might be obtained without a government guarantee of interest.

### BRITISH HONDURAS.

The Bureau of the American Republics made announcement recently that the people of British Honduras had petitioned the home government for the adoption of the United States gold dollar as a standard of value in the substitution of gold for silver currency which has been arranged for. An article in a recent number of the Colonial Guardian of Belize gives the reasons for this action. "United States currency," says the Guardian, quoting an address of the people's committee, "is the natural currency for this colony and that best suited to our local position and trade requirements." "The governor of British Honduras," adds the Guardian, "has frequently declared that this colony has in the future to trust chiefly to its agricultural products, and as our market for these products is solely and exclusively with the United States, its currency is best adapted to the encouragement of these industries, and to the future development of the colony." The people's committee say: "Our direct communication by steamer with England is irregular and uncertain, and the loss of time involved in the import and export of specie would be too great. There is not security that a sufficiency of British currency can at short notice be obtained in the United States. Especially would this be the case in New Orleans which is practically our monetary center, and from which the fruit vessels which trade with the colony draw their supplies of specie."

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### CHILE.

The government of Chile has issued a decree declaring that cyanide of potassium and other similar substances may be imported duty free. A bill granting the exemption, which was passed by Congress, was framed on the petition of a representative of a gold extracting company, as an encouragement to gold mining in Chile.

The Chilean Congress is considering a bill which throws open the construction of railways in Chile to all on equal terms. The bill was prepared after consultation between a standing committee of Congress and the cabinet ministers. The gratuitous use of public and municipal lands is conceded for the use of railways. Railways shall not

be built on the public roads, nor shall there be any grade crossings, and on private properties there shall be constructed such overhead and subways as may be necessary. The legal domicile of all owners of railways shall be Chile, and they shall be subject in everything relating to their undertakings to Chilean laws. The practical effect of the bill, as stated by the Chilean Times, would be that "small capitalists or a few proprietors among themselves would no longer be deterred, from a fear of expense and loss of time, from applying for powers to construct district lines. It should not be forgotten either that short district lines may very well develop into important roads which may open up very important sections of the country. In an immense number of cases, haulage to the grand trunk line or to the coast is a very costly matter at the present time, and greatly enhances the cost of agricultural produce. The case would be very different, however, if lines of railway were to take the place of the slow and unwieldy ox-cart and roads often of the worst description."

The following railway bills have been acted upon by the Chilean Congress:

A bill to empower Don Gustavo A. Oehninger to construct a railway from Peumo to Rancagua, a distance of about seventy kilometers, has passed the Deputies.

A bill to empower Mr. Charles A. Waters to construct a railway from Antofagasta to Aguas Blancas has passed both Chambers.

A bill has passed the Deputies to declare of public utility the lands necessary for an electric tramway between Santiago and Santa Rosa.

A bill to empower Don Cesar Covarrubias to construct a railway from Melipilla to Quilpue has passed a first reading in the Deputies.

A bill authorizing the prolongation of the Tongoy Railway has passed the Senate.

A bill to empower Don José Tomas Ramos to construct a railway from San Felipe to Piguichen has passed a first reading in the Senate.

With a view of stimulating the production of coal, a bill to exempt coal mines in Magallanes and Chilo from the payment of license during a period of fifteen years has been passed in the Chilean Chamber of Deputies. The properties are not to exceed 4,940 acres, and the annual production must be not less than 500 tons.

In order to afford home-made powder an advantage in competition

with the imported article, a bill has been passed by the Chilean Chamber of Deputies to reduce the duty on nitrate of potassium and chloride of potassium 15 per cent.

Mr. Guillermo Raby has been commissioned by the government of Chile to study coal mining in England, France and Belgium, and to prepare a report on the same.

A recent number of the Chilean Times states that the Joint Committee of the two Houses of the Chilean Congress has reported, as a means of increasing the production of nitrate, in favor of a law to prevent the forming of associations or the making of agreements to restrict, by artificial means, the production of this fertilizer. The committee expresses the opinion that this law should be framed in general terms to prevent, in the future, the formation of analogous associations intended to restrict or limit the free exercise of an industry, profession or trade. Referring to this bill, the same newspaper, in a subsequent issue, says: "The presentation of this measure may be accepted as the answer of the Chilean Congress to the recent attack on Chile and the Chilean government by the Nitrate Circle in London." "The actual combination," adds the Times, "will cease to exist in March, and then the era of the survival of the fittest will be inaugurated for the nitrate works generally."

### MEXICO.

Mr. John Herbert Firth has obtained from the government of Mexico a concession empowering him to settle Hindoo colonists in Mexico. To this end, the government agrees to sell to Mr. Firth 500,000 hectares (1,235,550 acres) of public land in the states of Chiapas, Tabasco, Yucatan, Vera Cruz, Guerrero and Michoacan, and the territory of Tepic. Mr. Firth agrees to give to each one of the colonists at least five hectares (12,355 acres) of land for cultivation. Within ten years, Mr. Firth is to introduce at least 500 families of immigrants, twenty to be brought in during the first year. The colonists are to enjoy during the ten years certain privileges, such as exemption from military service and from all taxation excepting the municipal tax and the stamp tax, etc. The Mexican Financier says: "We have more than once pointed out the desirability of settling Hindoo colonists in this country."

Two ladies from the United States have recently returned from a trip into the wilds of Chiapas, which was taken for the purpose of looking into the prospects for investment in lands in Chiapas and of investigating the coffee industry on the Isthmus of Tehuantepec. They report that there are many haciendas under fine cultivation in Chiapas, one of them comprising upward of 50,000 acres. Land in Chiapas bought from the government costs about 40 cents an acre. An English company has bought a great tract of coffee land, seventy leagues long by fifty wide, in the district of Soconusco. There are about fifty persons from the United States in Chiapas. A representative of the Japanese government has recently secured a large reservation of land for his countrymen, and an importation of Japanese colonists and laborers is to be made.

J. M. Murray and F. F. Durkee, of Topeka, Kans., have sent a representative to the Isthmus of Tehuantepec, Mexico, to acquire about 100,000 acres of land near Coatzacoalcos, with a view of colonization for coffee growing.

The Armour Packing Company, of Chicago, recently sent agents to report on the prospects of stock raising in Sonora, Mexico, with a view to the establishment on Mexican soil of a meat cannery. They are understood to have reported that the cattle on the Sonora ranges were suitable, but that the hogs were few and ill-conditioned. They believe, however, that the state affords good facilities for breeding hogs to meet the demand of the proposed cannery.

The concession held by Messrs. Henkel Bros., for the construction of a railway from Teluca to Tenango, Mexico, has been reissued with modifications. Branches may be built to Santiago, Tianguis-tengo, and Calimaya, and the main line may be extended to Tenancingo. The line from Toluca to Tenango must be completed within six years from January 10, 1894.

A change is also reported in the concession granted to Luis Nien-doff, William Dick and A. L. Clark, for the construction of a railroad from the port of Chamela, on the west coast of Mexico, to the city of Guadalajara, and thence to the city of San Luis Potosi, thus making with the San Luis Potosi connection a transcontinental line across Mexico to the port of Tampico on the Gulf of Mexico. The revised concession allows for extensions of the line to the towns of Tequila, Etzatlan, Magdalena, Tequesquita and other points along

the *barranca* [ravine] of Mochitiltic, which will add materially to the length and usefulness of the road.

From a statement furnished by the Mexican secretary of finance, it appears that during the last half of the fiscal year 1892-'93, ending June 30, the total commercial and mineral exports of Mexico aggregated in value \$47,000,000, of which \$36,000,000 came to the United States.

A commission of citizens from the state of Vera Cruz, Mexico, recently waited upon President Diaz to urge that Alvarado be made a regular maritime port. Plans have been made for colonization along the coasts of Sotavento tributary to Alvarado. A German syndicate, with a capital of \$1,000,000, is preparing to settle large number of German and Belgian colonists on lands which are to be planted in tobacco.

President Diaz has signed the concession for the completion of the Interoceanic railway from Matamoras to Acapulco.

The Mexican government has entered into an arrangement with Señor Francisco Espinosa for control of all the water flowing from the great canal and five-mile tunnel now being constructed for the drainage of the valley of Mexico. The water is to be used for irrigation in the states of Mexico and Hidalgo to the north of the valley. An immense water power will be obtained, and it is expected that ultimately large manufacturing enterprises will utilize it. The works are to be completed in about two years.

A concession for supplying the city of Monterey with water has been granted to Col. James B. Simpson, of Dallas, Tex., who will also control the proposed new sewer system of the city.

The Lower California Development Company has obtained a concession empowering it to run a line of steamers between San Diego Cal., and Ensenada, San Quentin, and other parts of Lower California.

William B. Woodrow has obtained from the Mexican government a concession empowering him to establish a system of insurance on letters and parcels transmitted by mail from point to point of the republic, or between Mexico and foreign countries. He is also authorized to introduce, in connection with this business, a service of small money-orders for sums not exceeding \$25 between such towns of Mexico as he may select, or between points in Mexico and

abroad. The new service must be inaugurated in April next, and may continue for ten years.

The postal code of Mexico, it is stated, is to be materially improved. A commission for this purpose has been named by the government. The proposed changes are: The reduction of the tariff on printed matter and of the domestic rates of letter postage. Facilities for the prompt and safe handling of foreign mails are also to be adopted.

A Chicago company is actively engaged in developing the marble quarries at a point about twelve miles south of Ciudad Juarez (Paso del Norte), Mexico. Seven quarries have recently been opened.

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#### MISCELLANEOUS.

A recent number of the Panama Star and Herald gives a favorable statement as to the progress of the work on the Cauca railroad from Buenaventura to Cali, Colombia. The owner of the concession, Mr. J. L. Cherry, is reported as saying that the work is progressing remarkably well, considering the labor difficulties with which he has had to contend.

The government of Haiti has increased the tonnage dues of steamers from 50 cents per ton of cargo landed at any point in Haiti, to \$1.83 per ton. This makes the rate for steamers the same as sailing vessels.

A provisional arrangement has been concluded between the Peruvian government and the Peruvian Corporation, suspending the monthly payments of the customs annuity until September next, the Peruvian Corporation being, in the meantime, freed from all fiscal, local and municipal taxes, and from the obligation to construct fifty kilometers of railway. It is understood that this arrangement has been made pending a final settlement by the next Congress.

The cacao crop of Ecuador for 1893 is said to be the best on record, aggregating 401,654 quintals, as against 334,625 quintals in 1892. The heaviest previous crop was in 1886, which was 17,000 quintals less than last year's yield. The quality in 1893 has also been very good.



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